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**ANALYSIS OF MILITARY OCCUPATIONAL
SPECIALTIES AND HOSPITALIZATION
PART 1: 25 LARGEST ARMY ENLISTED OCCUPATIONS**

**U S ARMY RESEARCH INSTITUTE
OF
ENVIRONMENTAL MEDICINE
Natick, Massachusetts**

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**ANALYSIS OF MILITARY OCCUPATIONAL SPECIALTIES
AND HOSPITALIZATION**

PART 1: 25 LARGEST ARMY ENLISTED OCCUPATIONS

Prepared by

Paul J. Amoroso, MD, MPH

Michelle M. Yore, MSPH

U.S. Army Research Institute of Environmental Medicine

Gordon Smith, MD, MPH

Johns Hopkins University, School of Hygiene and Public Health

Mary Lopez, PhD, CPE

U.S. Army Center for Health Promotion and Preventive Medicine

18 November 1997

Military Performance Division

U.S. Army Research Institute of Environmental Medicine

Natick, MA 01760-5007

TABLE OF CONTENTS

	<u>PAGE</u>
TABLE OF CONTENTS.....	iii
LIST OF TABLES.....	iv
LIST OF APPENDICES.....	iv
BACKGROUND	v
ACKNOWLEDGMENTS	vii
LIST OF ABBREVIATIONS AND ACRONYMS	viii
EXECUTIVE SUMMARY	1
INTRODUCTION	3
METHODS	5
RESULTS	8
DISCUSSION	27
CONCLUSION.....	29
REFERENCES	30
APPENDICES	31
DISTRIBUTION LIST	57

LIST OF TABLES

<u>TABLE</u>	<u>PAGE</u>
TABLE 1: ENLISTED ARMY PERSONNEL BY MILITARY OCCUPATIONAL SPECIALTY, GENDER, RACE/ETHNICITY, PAY GRADE AND AGE (PERSON-YEARS)	10
TABLE 2: TOP 40 CAUSES OF HOSPITALIZATIONS (BY 3-DIGIT ICD9) FOR U.S. ARMY ENLISTED FEMALES, 1990-1994	12
TABLE 3: TOP 40 CAUSES OF HOSPITALIZATIONS (BY 3-DIGIT ICD9) FOR U.S. ARMY ENLISTED MALES, 1990-1994.....	13
TABLE 4: HOSPITALIZATION RATES BY MILITARY OCCUPATIONAL SPECIALTY AND GENDER	16
TABLE 5: HOSPITALIZATION CATEGORIES BY MOS AND GENDER, 1990-1994, RATES PER 10,000 PERSON-YEARS	20
TABLE 6: TRAUMA CODES FOR ACUTE INJURIES.....	24
TABLE 7: SUMMARY INJURY CAUSE CODES FOR ACUTE INJURIES	25
TABLE 8: TOP 15 SPECIFIC INJURY CAUSE CODES FOR ACUTE INJURIES	26

LIST OF APPENDICES

<u>APPENDIX</u>	<u>PAGE</u>
APPENDIX 1: ENLISTED MOS PHYSICAL DEMANDS AND TASKS, FREQUENCY BY PERSON-TIME, 1990-1994	32
APPENDIX 2: YEARLY MOS TOTALS BY GENDER.....	38
APPENDIX 3: MOS AND 5-YEAR AGE GROUPS (PERSON-YEARS), 1990-1994	40
APPENDIX 4: TRAUMA CODES BY MOS	41
APPENDIX 5: SPECIFIC INJURY CAUSES BY MOS.....	46

BACKGROUND

The U.S. Army Medical Research and Materiel Command (USAMRMC) manages and executes a worldwide research and development (R&D) mission aimed at military medical problems of importance to national defense. The medical R&D programs within the command provide data and material necessary to protect, maintain, or restore the health of the individual servicemember. At the U.S. Army Research Institute of Environmental Medicine (USARIEM) in Natick, Massachusetts, a subordinate command of USAMRMC, the Military Performance Division conducts epidemiological studies of injuries among Army personnel.

While it has been recognized that injury risks will vary by the type of work done, little is known as to how these risks actually vary by occupational specialty. With increasing involvement of women in nearly all Military Occupational Specialty groups, it is important to understand if these women have unique risks when doing the same jobs as men.

Army leadership has long recognized the need for medical and epidemiological research efforts to expand the operational roles of women in performance of the military mission. In 1994, in support of the need to examine the health issues of women in the military, Congress appropriated \$40 million dollars to initiate the Defense Women's Health Research Program (DWHRP). In August 1994, the DWHRP Tri-service Review Panel approved funding for USARIEM's protocol OMD95001-AP-H001 entitled "The Impact of Injuries on the Health and Readiness of Women in the Army from 1980-1994." The protocol was designed to investigate injuries among women in the Army over a 15-year period (1980 to 1994) by combining existing personnel and medical outcomes data from various Army and Department of Defense (DoD) sources into a single relational database.

The Total Army Injury and Health Outcomes Database (TAIHOD) was created as the initial action of the protocol (Amoroso et al., 1997). Maintained at USARIEM, this relational database provides the ability to link personnel records on the total active duty Army population with one or more of the following outcome measures: hospitalizations, lost-time injuries, physical disabilities, Health Risk Appraisal (HRA) survey data and

fatalities. Data are not restricted to a specific gender, allowing statistical comparisons and inferences with respect to different populations.

This report compares hospitalization outcomes and demographics for enlisted personnel from 1990-1994 for the 25 largest Military Occupational Specialties (MOS). The top causes of hospitalizations are described for men and women, specific hospitalization categories are compared by MOS, and reported causes of injuries are identified. Differences in hospitalization causes and injury causes between genders and MOSSs are identified from the data.

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LIST OF ABBREVIATIONS AND ACRONYMS

DMDC	Defense Manpower Data Center
DMOS	Duty Military Occupational Specialty
DoD	Department of Defense
DWHRP	Defense Women's Health Research Program
ICD9	International Classification of Disease, 9th Edition
MOS	Military Occupational Specialty
NATO	North Atlantic Treaty Organization
PMOS	Primary Military Occupational Specialty
STANAG	NATO Standardization Agreement
TAIHOD	Total Army Injury and Health Outcomes Database
USARIEM	U.S. Army Research Institute of Environmental Medicine

EXECUTIVE SUMMARY

The impact of injuries on the mission, readiness, and budget of the Armed Forces is startling. To uncover the complete spectrum of injury morbidity and mortality among servicemembers, the U.S. Army Research Institute of Environmental Medicine developed a research database, the *Total Army Injury and Health Outcomes Database* (TAIHOD). This report is one of a series to be created using data from this database. The purpose of this report is to provide a description of the hospitalization rates and causes in the 25 largest Military Occupational Specialties (MOS) for women and men in the Army, focusing on acute injury, certain musculoskeletal conditions, and pregnancy. In addition, this report describes the demographic differences between each MOS, identifies MOSs at higher risk of illness or injury, and identifies specific causes of injuries.

The TAIHOD is a versatile system that joins six separate personnel and health outcomes datasets from several Defense Department agencies (Amoroso et al., 1997). All data components are linked by social security number at the level of the individual soldier. The social security numbers are encrypted, and names are dropped to ensure confidentiality of the data. The TAIHOD links three general categories of data: demographics (e.g., rank, gender, racial-ethnic group, military occupational specialty); outcomes (hospitalizations, lost-time injuries, permanent disabilities, and fatalities); and self-reported health habits. Only the demographics and hospitalization databases were used for this report.

Demographics data from the years 1990-1994 were used to identify the 25 most populated MOSs of enlisted personnel. Encrypted social security numbers were used to link the demographics data to the hospitalization database in order to identify if a person was hospitalized while in a specific MOS. The resulting hospitalization data were analyzed by International Classification of Disease, 9th Edition (ICD9) codes, and cause of injury NATO Standardization Agreement (STANAG) codes. Hospitalization rates for acute injuries and specific musculoskeletal conditions were compared to hospitalization rates for other conditions. In order to identify differences between women and men, gender-specific hospitalization rates for the top 25 occupational groups were calculated. The STANAG trauma and injury codes identify both the type of injury and the

circumstances under which an injury occurred. Causes of injuries by MOS were compared using specific injury codes.

The reasons for hospitalization vary widely between enlisted men and women. Overall, the majority of women's hospitalizations are pregnancy-related (40%). The largest proportion of men's hospitalizations, 4%, is for internal derangement of the knee. Women have higher rates of hospitalization for musculoskeletal conditions, while men have higher rates of hospitalization for injuries and poisonings. The men in MOS 11B (Infantrymen) have the highest hospitalization rates for both acute injuries and musculoskeletal conditions. For women, the highest rate of musculoskeletal hospitalizations was among Light-wheeled Vehicle Mechanics, MOS 63B, and the highest rate of acute injury/poisoning hospitalizations was among Medical Equipment Repairer, MOS 91A. Thirty percent, and possibly more, of reported acute injuries occurred while on duty; duty status was unknown for over 40% of acute injuries. Falls and other or unspecified agents caused the largest percentage of injuries for men and women, while accidents in land transport caused approximately 16% of all injuries.

This report is the first in a series devoted to the identification of Army sub-populations at greatest risk of injury, specifically high-risk military occupational specialties. The specific types and circumstances of injury are identified, and the relative morbidity from injuries versus illness or disease is compared. Of particular concern are the high rates of injury and musculoskeletal hospitalizations in Infantrymen (MOS 11B) for men, and in Medical Equipment Repairer (MOS 91A) and Light-wheeled Vehicle Mechanics (MOS 63B) for women. Future reports will provide a more in-depth analysis of the MOSs at highest risk for injury, will control for variables such as age, race, and physical fitness level, and will identify changing rates of injury and illness over time. In the future, potential education and intervention programs targeted to the MOSs and/or gender at highest injury risk could be developed to reduce the number of injuries.

INTRODUCTION

The cumulative impact of all injuries among Army personnel is a critical issue directly affecting the mission, readiness, and budget of the Armed Forces as a whole (Amoroso et al., 1997). Injuries are the most common source of premature mortality or lost person-years of productive life, lost time from work, and the most frequent cause of death in the U.S. among persons under the age of 45. In addition, the long-range consequences of injuries are often hard to forecast and may be very costly. Long-term disability may be delayed for months or years from the acute manifestations of an injury. Analysis of broad categories of data, from multiple sources and over long periods of time, give researchers an improved understanding of where to optimally focus injury and illness prevention resources.

The Department of the Army Military Occupational Specialty/Physical Standards Working Group, organized by the Office of the Assistant Secretary of the Army (Manpower and Reserve Affairs), requested injury data on the most populated MOSs from 1990-1994. Their intent was to identify differences in injury risk among various military occupations. These data would then be used to target in-depth analyses of MOS-specific job tasks or activities. This report was developed from that request.

Analyses of occupation-specific injury rates, such as those conducted by the Navy, suggest that injury rates can vary greatly by military occupation (LTC Karl Friedel, personal communication). Recent research also suggests that injury rates vary by gender and physical fitness levels (Bell et al., 1994). Given the changing demographics of the Army and the lack of a physical performance-based standard for most MOSs, a careful assessment of soldier physical performance and injury rates is needed. If certain jobs have higher rates of particular injuries, those occupational groups can be targeted for more specific and comprehensive ergonomic evaluation.

The purpose of this report is to provide a description of the hospitalization rates and causes of hospitalization in the 25 largest occupational specialties for women and men in the Army, focusing on acute injury, certain musculoskeletal conditions, and pregnancy. In addition, this report describes the demographic differences between each MOS, identifies MOSs at higher risk of illness or injury, and identifies specific causes of

such injuries. The relative morbidity from injuries versus illness or disease and the causes of injury are compared by gender within each MOS. High-risk groups could later be targeted for education and intervention programs to reduce the number and/or severity of injuries. Plans for research studies include the following: disabilities resulting from injuries in certain MOSSs, costs of injuries in terms of immediate lost-duty time and subsequent disability payments, and comparisons of Army injury rates in certain jobs with national average injury rates for parallel job descriptions.

METHODS

Demographic data from Defense Manpower Data Center (DMDC) yearly personnel files for 1990-1994 were used to identify the 25 most populated MOSs. The analysis was restricted to enlisted personnel (E1-E9) only, because they perform different duties, are quite different demographically (e.g., education level, rank structure) from officers, and are the targeted population of the Department of the Army Military Occupational Specialty/Physical Standards Working Group. The duties of these enlisted personnel are well described in the Military Occupational Classification and Structure (1995) manual. The most populated MOSs were identified by calculating the number of years (or fraction of a year) that each soldier spent in each MOS between 1990 and 1994. The unit of this calculation is the person-year. Person-years are a measure of the length of time a person is observed in a population at risk. For example, a person in an MOS for 10 months would have a person-time contribution of 0.83 years, and a person in an MOS for 1 year would have a person-time contribution of 1 year. In this population, the possible person-years ranged from 1 day (.003 year) to 5 years. The MOSs were then rank-ordered by total number of person-years for the 5-year time period 1990-1994. The top 25 MOSs together accounted for over 50% of the total person-time, while the remaining MOSs each accounted for less than 1% of the remaining person-time. In order to simplify the analysis and focus the attention on the largest job groups, only the top 25 most populated MOSs were evaluated.

The Military Occupational coding system (Military Occupational Classification and Structure, 1995) catalogs all jobs within the Army. The MOS provides a five-digit code that was truncated to the first three digits to allow identification of the specific occupational category. The last two digits generally specify different skill levels within the MOS and were not analyzed for this report. The Duty MOS (DMOS) was initially used to identify personnel; however, when the DMOS was missing, the Primary MOS (PMOS) was used instead. The DMOS was chosen as the primary identifier because it identifies the soldier's day-to-day job activities, while the PMOS identifies the job a soldier is primarily trained to perform. The PMOS and DMOS are not always the same. If a person changed MOSs during the year, the change was noted in the next available yearly personnel file. Using yearly personnel files enabled identification of MOS shifts, instead of assuming people had the same MOS throughout the study period. This allowed people to be studied for the length of time they were employed in one of the 25 MOSs

during the study period. However, if a person changed their MOS more than once in a given year, this event would not be detected using the available data.

A number of MOSs are closed to women. However, gender analysis of the data showed a small number of women present in these MOSs. This is assumed to be an error in the coding of the data; perhaps men are coded as women, or women are coded in an incorrect MOS. Because correction of this error would be quite time consuming and because the number errors is a very small percentage of the total cases (0.06% to 0.2% of an MOS), these cases were dropped from further analyses.

Racial/ethnic groups were classified according to the following categories: White, Black, Hispanic, American Indian/Alaskan Native, Asian/Pacific Islander, and Other/unknown. Rank was grouped into the following three categories: E1-E3, E4-E6 and E7-E9.

Encrypted social security numbers were used to link the demographic data to the hospitalization database for the years 1990-1994. For each year, demographic data were matched to the hospital file in order to detect hospitalizations within each specific MOS. The hospitalization data were further analyzed by gender, MOS, ICD9 code, and STANAG codes (trauma codes and injury cause codes). Hospitalization rates of certain specific ICD9 categories (injury and poisoning, musculoskeletal, pregnancy, back, knee, joint, inguinal hernia, other disorders of synovium, tendon and bursa, and all other hospitalizations) were calculated by MOS and gender. The number of hospitalizations in each category was used as the numerator, and person-years stratified by gender and MOS was used as the denominator. SAS software was used for data management and data analysis (SAS version 6.12, SAS Institute, Cary, North Carolina).

ICD9 codes are usually 3-5 digits, with the last 2 digits providing very specific diagnoses. Because we were interested in more general hospitalization categories, we used 3-digit ICD9 codes for all evaluations. The general categories of ICD9 codes studied include the following: hospitalizations for musculoskeletal conditions (ICD9 codes 710-739), hospitalizations for acute injury or poisoning (ICD9 codes 800-904.99, 910-957.99, 960-995.99), pregnancy-related hospitalizations (ICD9 codes 630-676.9), hospitalizations for acute back injury (ICD9 codes 846-847.9), hospitalizations for

chronic back problems (ICD9 codes 720-724.99), hospitalizations for acute derangement of the knee (ICD9 codes 836-836.99), hospitalizations for old internal derangement of the knee (ICD9 codes 717-717.99), hospitalizations for inguinal hernia (ICD9 codes 550-550.99), hospitalizations for non-specific joint-related problems (ICD9 codes 719-719.99), and hospitalizations for disorders of the synovium, tendon, and bursa (ICD9 codes 727-727.99).

The hospitalization data contain ICD9 codes for up to 8 diagnoses for each hospitalization. We used the ICD9 code from the first diagnosis only, because we were only interested in the primary reason for hospitalization.

RESULTS

Table 1 displays demographic data by MOS. (Appendix 1 contains additional information about the MOSSs in this study, such as job title and physical requirements). The MOSSs of Infantryman (11B), Indirect Fire Infantryman (11C), Heavy Anti-armor Weapons Infantryman (11H), Fighting Vehicle Infantryman (11M), Combat Engineer (12B), Cannon Crewmember (13B), Fire Support Specialist (13F), Cavalry Scout (19D), and Armor Crewman (19K) are closed to women. However, the analysis found that these MOSSs have a small number of women, from 0.06% to 0.20% of the total population. Because these MOSSs are closed to women, these soldiers are most likely incorrectly coded. However, we cannot determine if the error is due to an incorrect gender code (i.e., coded as female instead of male), an incorrect MOS code (e.g., coded as 11B when should be 54B), or the result of some other coding error. Because there is no reasonable method of verification or correction of the people coded incorrectly, they are shown in the gender column to display the amount of coding error, and dropped from all subsequent data analysis. Except for the MOSSs closed to women (which by their nature are 100% male), the MOS with the largest proportion of men (95%) is 52D, Power-Generation Equipment Repairer (n=27,944 males, n=1,364 females). The MOS with the largest proportion of women (45%) is 71L, Administrative Specialist (n=43,062 males, n=35,265 females). Appendix 2 provides yearly MOS totals by gender.

Four of the top 25 MOSSs (31K, 76C, 76Y, and 91A) were either recoded or discontinued during the study period, but have person-years as high as 65,000 over the 5-year study interval. Additional detail for these MOSSs is provided in Appendix 1.

Racial/ethnic group, rank, and median age vary widely in the MOSSs. Although whites represent 58% of this population overall and blacks 32%, the relative proportion of racial/ethnic groups per MOS varies dramatically. In MOS 95B, Military Police, 79% (n=78,058) of the population is white and 16% (n=15,548) is black. In MOS 76C, Equipment Records and Parts Specialist, 35% (n=8,640) is white and 53% (n=13,176) of the population is black. The Unit Supply Specialist (76Y) and Medical Specialist (91B) have the largest Hispanic population at 6%. 40% of the Medical Equipment Repairer (MOS=91A) population is at the E1-E3 rank (n=10,400). 83% of the Personnel

Administration Specialist (MOS=75B) population is at the E4-E6 rank (n=22,568). 24% of the Track Vehicle Repairer (MOS=63H) population is at the E7-E9 rank (5,467).

In several MOSSs, for example Medical Equipment Repairer (91A), the large proportion of lower ranking (E1-E3) personnel corresponds to a younger median age. On the other hand, Personnel Administration Specialist (75B) and Track Vehicle Repairer (63H) have higher median ages and ranks. The median ages of men and women also vary by MOS. The highest median age for females, 28 years, is in 54B, Chemical Operations Specialist. The lowest median age for females, 22 years, is in 76C, Equipment Records and Parts Specialist, and in 91A, Medical Equipment Repairer. The highest median age for males, 29 years, is in 63H, Track Vehicle Repairer, and 71L, Administrative Specialist. The lowest median age for males, 22 years, is in 91A, Medical Equipment Repairer. Appendix 3 displays the number of personnel by 5-year age groups and the relative proportions of the age groups in each MOS.

TABLE 1
**ENLISTED ARMY PERSONNEL BY MILITARY OCCUPATIONAL SPECIALTY,
 GENDER, RACE/ETHNICITY, PAY GRADE AND AGE
 (PERSON-YEARS)**

DUTY MOS	GENDER	MALE	RACE/ETHNIC GROUP				OTHER	E1-E3	E4-E6	E7-E9	FEMALE	MALE	MEDIAN AGE
			WHITE	BLACK	HISPANIC	ASIAN/AMERICAN INDIAN/ALASKAN							
COMBAT (MALE ONLY)													
Infantryman (11B)	FEMALE	352 *	194,384	139,752	34,088	10,749	3,844	1,320	4,627	53,559	118,475	22,336	N/A 24
Indirect Fire (11C)		22 *	35,822	25,458	6,711	1,899	623	231	901	9,692	22,700	3,429	N/A 23
Heavy Anti-armor Weapons (11H)		33 *	27,850	19,667	5,391	1,413	509	185	684	7,339	17,738	2,772	N/A 24
Fighting Vehicle (11M)		89 *	71,738	46,640	16,663	3,971	1,254	537	2,667	21,130	44,527	6,077	N/A 23
Combat Engineer (12B)		76 *	55,718	37,218	13,001	2,601	1,086	347	1,462	15,877	36,068	3,771	N/A 23
Cannon Crewmember (13B)		92 *	96,059	41,491	43,111	5,737	1,843	515	3,359	25,637	64,955	5,464	N/A 24
Fire Support Specialist (13F)		29 *	27,249	18,878	5,923	1,242	352	176	675	7,451	17,145	2,652	N/A 24
Cavalry Scout (19D)		88 *	43,602	30,659	8,618	2,073	668	370	1,213	12,120	28,386	3,096	N/A 24
Armor Crewman (19K)		75 *	73,069	47,738	17,627	3,938	1,230	404	2,131	18,082	48,142	6,846	N/A 24
OPEN MOS (MALE & FEMALE)													
Radio Operator-Maintainer (31C)	FEMALE	2,902	23,459	17,166	7,388	801	295	158	550	5,545	20,604	211	24 25
Combat Signaler (31K)**		1,233	21,568	11,533	9,298	1,001	257	145	564	5,927	16,865	9	24 23
Power-Generation Equipment Repairer (52D)		1,364	27,944	18,070	8,026	1,294	605	206	1,102	7,203	22,044	60	24 25
Chemical Operations Specialist (54B)		3,415	34,995	19,439	14,680	1,927	719	153	1,487	6,542	25,636	6,231	28 28
Light-wheeled Vehicle Mechanic (63B)		6,035	74,572	47,299	25,461	3,190	1,699	494	2,448	16,671	53,576	10,356	24 25
Track Vehicle Repairer (63H)		1,266	21,996	12,661	7,987	1,075	496	123	919	3,303	14,492	5,467	26 29
Administrative Specialist (71L)		35,265	43,062	29,533	40,545	3,791	1,970	358	2,123	12,224	54,282	11,819	26 29
Personnel Administration Specialist (75B)		6,776	20,380	9,930	14,094	1,412	637	139	942	4,243	22,568	345	27 26
Equipment Records & Parts Specialist (76C)**		5,740	18,955	8,640	13,176	1,453	588	95	741	5,916	18,758	21	22 25
Unit Supply Specialist (76Y)**		13,518	49,197	22,316	32,688	3,881	1,656	240	1,924	8,296	47,255	7,162	26 28
Petroleum Supply Specialist (77F)		7,309	30,629	14,434	19,403	1,923	752	143	1,284	10,423	25,575	1,941	23 25
Motor Transport Operator (88M)		10,022	60,836	36,419	29,314	2,244	787	375	1,718	15,616	51,755	3,487	24 26
Medical Equipment Repairer (91A)**		5,631	20,549	15,078	8,324	1,269	536	183	789	10,400	15,747	32	22 22
Medical Specialist (91B)		13,472	59,609	39,469	24,177	4,488	1,754	421	2,767	18,034	46,943	8,102	24 25
Food Service Specialist (94B)		15,284	57,189	29,163	36,986	2,884	1,290	360	1,789	18,163	44,232	10,077	24 26
Military Police (95B)		10,293	88,138	78,058	15,548	2,215	572	493	1,539	18,158	71,824	8,447	23 25

* Females in these male only MOS groups suggest an error of 0.06% to 0.20%.

** Discontinued MOS

Tables 2 and 3 display the top 40 causes of hospitalizations for enlisted women and men, respectively. Enlisted men and women are hospitalized for very different reasons. For women, 8 of the top 10 diagnoses (24% of total hospitalizations for females) and 20 of the top 40 diagnoses (40% of total hospitalizations for females) are pregnancy related. The largest individual diagnosis at the three-digit ICD9 level is for early or threatened labor (4.7%) for women, and internal derangement of the knee (4%) for men. Comparing the top hospitalization causes for men and women, only adjustment reaction and contraceptive management are in the top 10 hospitalizations for both. The number one cause of hospitalization in men, internal derangement of knee, is the 28th cause in women, and the number two cause of hospitalization in men, alcohol dependence syndrome, is the 35th cause in women. The hospitalization data also include one-day hospitalizations, leading to a high number of diagnoses of disorders of tooth development and eruption.

TABLE 2
TOP 40 CAUSES OF HOSPITALIZATIONS
(by 3-DIGIT ICD9) FOR U.S. ARMY ENLISTED FEMALES,
1990-1994

	DIAGNOSIS	# OF HOSPITALIZATIONS	% OF TOTAL HOSPITALIZATIONS	RATE OF HOSPITALIZATION
1.	Early or threatened labor	2,280	4.7	163.4
2.	Delivery in a completely normal case	1,795	3.7	128.7
3.	Trauma to perineum and vulva during delivery	1,743	3.6	124.9
4.	Other fetal and placental problems	1,528	3.2	109.5
5.	Contraceptive management	1,276	2.6	91.5
6.	Adjustment reaction	1,157	2.4	82.9
7.	Abnormality of forces of labor	1,142	2.4	81.9
8.	Spontaneous abortion	1,108	2.3	79.4
9.	Other current conditions in the mother classifiable	1,042	2.2	74.7
10.	Umbilical cord complications	1,029	2.1	73.8
11.	Inflammatory disease of ovary, fallopian tube, pelvic	960	2.0	68.8
12.	Pain, symptoms-female genital organs	941	1.9	67.4
13.	Viral and chlamydial infection	935	1.9	67.0
14.	Disorders of tooth development and eruption	822	1.7	58.9
15.	Other noninfectious gastroenteritis and colitis	706	1.5	50.6
16.	Hypertension complicating pregnancy, childbirth, and the	690	1.4	49.5
17.	Excessive vomiting in pregnancy	681	1.4	48.8
18.	Abnormality of organs and soft tissues of pelvis	630	1.3	45.2
19.	Other complications of pregnancy, not elsewhere classified	627	1.3	44.9
20.	Other problems - amniotic cavity and membranes	612	1.3	43.9
21.	Other symptoms involving abdomen and pelvis	607	1.3	43.5
22.	Other disorders of synovium, tendon, and bursa	517	1.1	37.1
23.	Acquired deformities of toe	460	1.0	33.0
24.	Malposition and malpresentation of fetus	459	0.9	32.9
25.	Antenatal screening	444	0.9	31.8
26.	Ectopic pregnancy	442	0.9	31.7
27.	Infections of kidney	433	0.9	31.0
28.	Internal derangement of knee	433	0.9	31.0
29.	Other obstetrical trauma	423	0.9	30.3
30.	Noninflammatory disorders -ovary, fallopian tube	406	0.8	29.1
31.	Missed abortion	389	0.8	27.9
32.	Dentofacial anomalies, including malocclusion	380	0.8	27.2
33.	Acute upper respiratory infections,multiple/unspecified	355	0.7	25.4
34.	Observation/evaluation suspected conditions	346	0.7	24.8
35.	Alcohol dependence syndrome	337	0.7	24.2
36.	Intestinal infections due to other organisms	334	0.7	23.9
37.	Other complications of labor and delivery, not elsewhere	331	0.7	23.7
38.	Acute pharyngitis	322	0.7	23.1
39.	Infectious and parasitic conditions in the mother	320	0.7	22.9
40.	Prolonged pregnancy	308	0.6	22.1

Hospitalization Rate is per 10,000 person-years

TABLE 3
TOP 40 CAUSES OF HOSPITALIZATIONS
(by 3-DIGIT ICD9) FOR U.S. ARMY ENLISTED MALES,
1990-1994

	DIAGNOSIS	# OF HOSPITALIZATIONS	% OF TOTAL HOSPITALIZATIONS	RATE OF HOSPITALIZATION
1.	Internal derangement of knee	6,361	4.0	49.8
2.	Alcohol dependence syndrome	5,149	3.2	40.3
3.	Adjustment reaction	5,077	3.2	39.7
4.	Inguinal hernia	4,291	2.7	33.6
5.	Disorders of tooth development and eruption	4,252	2.7	33.3
6.	Other derangement of joint	3,209	2.0	25.1
7.	Contraceptive management	3,030	1.9	23.7
8.	Viral and chlamydial infection	2,708	1.7	21.2
9.	Other noninfectious gastroenteritis and colitis	2,412	1.5	18.9
10.	Other disorders of synovium, tendon, and bursa	2,307	1.4	18.0
11.	Pneumonia, organism unspecified	2,197	1.4	17.2
12.	Follow-up examination	2,190	1.4	17.1
13.	Symptoms involving respiratory system, other chest	2,077	1.3	16.2
14.	Intervertebral disc disorders	2,008	1.3	15.7
15.	Streptococcal sore throat and scarlet fever	1,960	1.2	15.3
16.	Acute pharyngitis	1,888	1.2	14.8
17.	Other disorders of bone and cartilage	1,879	1.2	14.7
18.	Other cellulitis and abscess	1,785	1.1	14.0
19.	Other and unspecified disorders of back	1,721	1.1	13.5
20.	Other and unspecified disorders of joint	1,712	1.1	13.4
21.	Other orthopedic aftercare	1,666	1.0	13.0
22.	Acute upper respiratory infections, multiple/unspecified	1,598	1.0	12.5
23.	Chickenpox	1,526	1.0	11.9
24.	General symptoms	1,507	0.9	11.8
25.	Peripheral enthesopathies and allied syndromes	1,505	0.9	11.8
26.	Intracranial injury of other and unspecified nature	1,464	0.9	11.5
27.	Acute appendicitis	1,431	0.9	11.2
28.	Nondependent abuse of drugs	1,401	0.9	11.0
29.	Dentofacial anomalies, including malocclusion	1,399	0.9	10.9
30.	Deviated nasal septum	1,343	0.8	10.5
31.	Acquired deformities of toe	1,313	0.8	10.3
32.	Fracture of ankle	1,312	0.8	10.3
33.	Fracture of face bones	1,234	0.8	9.7
34.	Other symptoms involving abdomen and pelvis	1,216	0.8	9.5
35.	Sprains and strains of knee and leg	1,135	0.7	8.9
36.	Intestinal infections due to other organisms	1,104	0.7	8.6
37.	Dislocation of knee	1,083	0.7	8.5
38.	Observation/evaluation suspected conditions	1,081	0.7	8.5
39.	Calculus of kidney and ureter	1,074	0.7	8.4
40.	Asthma	1,047	0.7	8.2

Hospitalization Rate is per 10,000 person-years

Table 4 displays hospitalization rates per 10,000 person-years by MOS and gender. The highest rate of injury/poisoning hospitalizations for men was in MOS 11B, Infantrymen (260 per 10,000), and the highest rate for women was in MOS 91A, Medical Equipment Repairer (206 per 10,000). The highest rate of musculoskeletal hospitalizations for men was also in Infantrymen (248 per 10,000), and the highest rate for women was MOS 63B, Light-wheeled vehicle mechanic (310 per 10,000). The male-only MOSs (Infantryman [11B], Indirect Fire Infantryman [11C], Heavy Anti-Armor Weapons Infantryman [11H], Fighting Vehicle Infantryman [11M], Combat Engineer [12B], Cannon Crewmember [13B], Fire Support Specialist [13F], Cavalry Scout [19D], Armor Crewman [19K]) and Medical Equipment Repairer (91A) had very high acute injury/poisoning hospitalization rates (over 200 per 10,000); however, musculoskeletal hospitalizations in these MOSs varied widely. Medical Equipment Repairer (91A) was also hazardous for women. Women in this MOS had the highest rates of acute injury/poisoning hospitalizations (206 per 10,000), and the fourth highest rates of musculoskeletal hospitalizations (300 per 10,000). Musculoskeletal hospitalization rates in women were also above 300 per 10,000 for the Combat Signaler (31K), Chemical Operations Specialist (54B), and Light-wheeled Vehicle Mechanic (63B).

Table 4 also shows the mean hospitalization rate in each hospitalization category. Rates that are more than 1.5 standard deviations from the mean are right-justified if higher and left-justified if lower to allow quick scanning of the chart. Male Infantryman (11B) and Medical Specialists (91B) have musculoskeletal hospitalization rates greater than two standard deviations above the mean, and Combat Signalers (31K) have musculoskeletal hospitalization rates less than two standard deviations below the mean. Women Medical Equipment Repairers (91A) have injury/poisoning hospitalization rates greater than 1.5 standard deviations above the mean. No male MOS categories had an injury/poisoning hospitalization rate greater or less than two standard deviations from the mean, and no female MOS categories had a musculoskeletal hospitalization rate greater or less than two standard deviations from the mean.

In the top 25 MOSs, men have higher rates of injury/poisoning hospitalizations, with an overall rate of 196 injury/poisoning hospitalizations per 10,000 person-years, compared to 120 injury/poisoning hospitalizations per 10,000 person-years for women. Women have higher rates of musculoskeletal hospitalizations, an overall rate of 228 per

10,000 person-years, compared to 209 musculoskeletal hospitalizations per 10,000 person-years for men. Women's rates of hospitalization for other reasons (not including pregnancy-related, injury poisoning or musculoskeletal) was 1,743 per 10,000; over twice as high as the rates for men (841 per 10,000). Comparing the hospitalization rates for the top 25 MOSs to all other MOSs, the injury/poisoning hospitalization rate in all other MOSs is lower for men and women, while the musculoskeletal hospitalization rate is higher for women and the same for men.

TABLE 4
HOSPITALIZATION RATES BY
MILITARY OCCUPATIONAL SPECIALTY and GENDER

DUTY MOS	GENDER	Primary Diagnosis/ICD9 Codes				
		800-904.99, 910-957.99, 960-995.99 Injury/Poison	710-739 Musculoskeletal	630-676.9 Pregancy	Other hospital	Total Hospitalization Rate
COMBAT (MALE ONLY)						
Infantryman (11B)	MALE	259.9	247.7	0.0	838.1	1345.7
Indirect Fire (11C)	MALE	221.1	194.0	0.0	719.9	1135.1
Heavy Anti-armor Weapons (11H)	MALE	221.2	233.8	0.0	728.9	1183.9
Fighting Vehicle (11M)	MALE	223.5	173.4	0.0	725.1	1122.0
Combat Engineer (12B)	MALE	230.3	206.2	0.0	873.9	1310.3
Cannon Crewmember (13B)	MALE	213.5	191.2	0.0	818.1	1222.9
Fire Support Specialist (13F)	MALE	211.8	213.6	0.0	766.6	1192.0
Cavalry Scout (19D)	MALE	226.6	184.4	0.0	738.0	1149.0
Armor Crewman (19K)	MALE	220.7	187.2	0.0	747.9	1155.9
OPEN MOS (MALE & FEMALE)						
Radio Operator-Maintainer (31C)	MALE	178.2	186.7	0.0	822.7	1187.6
	FEMALE	137.9	248.1	1378.6	1750.8	3515.4
	TOTAL	173.7	193.5	0.0	924.9	1443.8
Combat Signaler (31K)**	MALE	167.8	155.3	0.0	852.7	1175.8
	FEMALE	121.7	308.3	1654.9	1792.8	3877.7
	TOTAL	165.3	163.6	0.0	903.5	1321.9
Power-Generation Equipment Repairer (52D)	MALE	167.5	195.0	0.0	779.4	1141.9
	FEMALE	139.3	293.2	1114.3	1642.1	3188.8
	TOTAL	166.2	199.6	0.0	819.6	1237.2
Chemical Operations Specialist (54B)	MALE	175.7	227.5	0.0	881.8	1285.0
	FEMALE	146.4	307.5	1186.0	1806.8	3446.6
	TOTAL	173.1	234.6	0.0	964.1	1477.2
Light-wheeled Vehicle Mechanic (63B)	MALE	154.5	220.7	0.0	822.7	1197.9
	FEMALE	134.2	309.9	1411.9	1880.8	3736.8
	TOTAL	153.0	227.4	0.0	901.9	1388.0
Track Vehicle Repairer (63H)	MALE	136.8	236.0	0.0	736.0	1108.8
	FEMALE	63.2	213.2	1484.6	2021.5	3782.5
	TOTAL	132.8	234.7	0.0	806.0	1254.4
Administrative Specialist (71L)	MALE	117.3	204.8	0.0	861.5	1183.6
	FEMALE	78.8	195.9	1244.3	1502.6	3021.7
	TOTAL	100.0	200.8	0.0	1150.2	2011.2
Personnel Administration Specialist (75B)	MALE	125.1	195.3	0.0	745.8	1066.2
	FEMALE	85.6	190.4	1316.4	1478.7	3071.0
	TOTAL	115.3	194.1	0.0	928.7	1566.5
Equipment Records & Parts Specialist (76C)	MALE	146.7	181.5	0.0	872.0	1200.2
	FEMALE	120.2	205.6	1731.8	1653.4	3710.9
	TOTAL	140.5	187.1	0.0	1053.6	1783.7
Unit Supply Specialist (76Y)**	MALE	143.5	193.9	0.0	844.6	1182.0
	FEMALE	91.7	207.1	1422.5	1689.6	3411.0
	TOTAL	132.3	196.8	0.0	1026.7	1662.4
Petroleum Supply Specialist (77F)	MALE	173.4	198.8	0.0	925.9	1298.1
	FEMALE	179.2	221.7	1487.3	1874.5	3762.7
	TOTAL	174.5	203.2	0.0	1108.7	1772.9
Motor Transport Operator (88M)	MALE	189.5	217.1	0.0	886.0	1292.7
	FEMALE	142.7	240.5	1474.8	1813.0	3670.9
	TOTAL	182.9	220.4	0.0	1017.1	1629.0
Medical Equipment Repairer (91A)**	MALE	237.5	207.3	0.0	1234.6	1679.4
		206.0	300.1	1530.9	2465.1	4502.2
	TOTAL	230.7	227.3	0.0	1499.3	2286.5
Medical Specialist (91B)	MALE	167.9	247.6	0.0	1079.0	1494.6
	FEMALE	124.0	280.6	1356.2	2082.1	3842.8
	TOTAL	159.8	253.7	0.0	1264.0	1927.5
Food Service Specialist (94B)	MALE	157.5	192.0	0.0	1034.6	1384.2
	FEMALE	142.0	192.4	1556.5	1810.4	3701.2
	TOTAL	154.3	192.1	0.0	1198.2	1872.8
Military Police (95B)	MALE	152.8	203.5	0.0	790.5	1146.8
	FEMALE	152.5	240.0	1165.9	1626.4	3184.8
	TOTAL	152.8	207.4	0.0	877.9	1359.9

TABLE 4
HOSPITALIZATION RATES BY
MILITARY OCCUPATIONAL SPECIALTY and GENDER

DUTY MOS	GENDER	Primary Diagnosis/ICD9 Codes				Total Hospitalization Rate
		800-904.99, 910-957.99, 960-995.99 Injury/Poison	710-739 Musculoskeletal	630-676.9 Pregnancy	Other hospital	
Rate for top 25 MOS	MALE	196.0	209.0	0.0	840.8	1245.8
	FEMALE	119.9	227.8	1378.3	1742.8	3468.8
	TOTAL	188.5	210.9	135.6	929.6	1464.6
All Other MOS	MALE	146.6	207.6	0.0	828.4	1182.6
	FEMALE	104.8	242.2	1229.1	1704.8	3280.9
	TOTAL	140.8	212.4	0.0	950.1	1474.0
MEAN of all MOS	MALE	183.3	203.9	0.0	844.4	1231.7
	FEMALE	127.7	246.9	1396.8	1799.7	3571.1
	TOTAL	179.9	206.9	0.0	936.6	1472.5
STD DEV	MALE	39.0	22.2	0.0	119.3	131.6
	FEMALE	36.0	44.3	173.7	233.9	367.9
	TOTAL	41.9	22.5	0.0	189.7	311.8
RANGE (+ or - 1.5 std dev)	MALE+	241.8	237.2	0.0	1023.3	1429.1
	MALE-	124.8	170.6	0.0	665.6	1034.3
	FEMALE+	181.6	313.4	1657.3	2150.6	4122.9
	FEMALE-	73.7	180.4	1136.3	1448.9	3019.2
	TOTAL+	242.8	240.7	0.0	1221.1	1940.3
	TOTAL-	117.0	173.1	0.0	652.0	1004.8

** Discontinued MOS

Note: Hospitalization rates are right-justified if greater than 1.5 standard deviations above the mean, and left-justified if less than 1.5 standard deviations below the mean.

Table 5 displays hospitalization rates per 10,000 person-years by MOS and gender for back, knee, inguinal hernia, joint, and disorders of the synovium, tendon and bursa. Acute back hospitalizations include sprains and strains of the back; while chronic back hospitalizations include ankylosing spondylitis, spondylosis, intervertebral disc disorders, and disorders of the cervical region. Acute knee hospitalizations include dislocations and tears of the cartilage and/or meniscus; while internal derangement of the knee includes degeneration, old rupture or tear, and chondromalacia of the patella.

Hospitalization rates for chronic back problems were much higher than acute back hospitalization rates, though rates for chronic back hospitalizations were similar for women and men. The MOS with the highest rate of acute back hospitalizations for men was 88M, Motor Transport Operator (8 per 10,000), and the highest rate of chronic back hospitalizations was 63H, Track Vehicle Repairer (48 per 10,000). The MOS with the highest rate of acute back hospitalizations for women was 91A, Medical Equipment Repairer (16 per 10,000), and the highest rate of chronic back hospitalizations was 95B, Military Police (44 per 10,000).

The overall rate for acute and internal derangement of the knee was lower for women than for men. The exception was in Power-generation Equipment Repairer (52D), where the rate for internal derangement of the knee for women (95 per 10,000) was 60% higher than the rate for men (59 per 10,000). Power-generation Equipment Repairer had the highest rate of hospitalization for internal derangement of the knee for men and women. However, the small number of women in this MOS could make this rate unreliable. The MOS with the highest rate of hospitalization for acute derangement of the knee for women (9 per 10,000) was 54B, Chemical Operations Specialist, and the highest rates for men (11 per 10,000) were MOS 76C, Equipment Records and Parts Specialist, and MOS 91A, Medical Equipment Repairer.

The overall hospitalization rates for joint disorders for men and women were similar. The MOS with the highest hospitalization rate of joint disorders of the lower extremity for women (31 per 10,000) was 31C, Radio Operator-maintainer, and for men (15 per 10,000) was MOS 91A, Medical Equipment Repairer. The MOS with the highest hospitalization rate of joint disorders of the upper extremity for women (37 per 10,000)

and the highest rate for men (5 per 10,000) was 52D, Power-generation Equipment Repairer.

Men had much higher hospitalization rates for inguinal hernia, and women had much higher hospitalization rates for disorders of the synovium, tendon, and bursa. The MOS with the highest hospitalization rate for disorders of the synovium, tendon, and bursa for women (52 per 10,000) and men (23 per 10,000) was 91B, Medical Specialist. The second highest rate of these hospitalizations for women (50 per 10,000) was Medical Equipment Repairer (91A). Hospitalizations for disorders of the synovium, tendon, and bursa were almost twice as high for women as for men. The MOS with the highest hospitalization rate of inguinal hernia for women (16 per 10,000) was 63H, Track Vehicle Repairer, and the highest rate for men (40 per 10,000) was 94B, Food Service Specialist.

TABLE 5
HOSPITALIZATION CATEGORIES BY MOS AND GENDER, 1990-1994
Rates per 10,000 Person-Years

		PRIMARY DIAGNOSIS				JOINT (i.e., effusion, pain, stiffness)		727-727.99	
								719-719.99	
				KNEE		Lower Extremity		Synovium tendon & bursa	
DUTY MOS	GENDER	846-847.9	720-724.99	836-836.99	717-717.99	550-550.99			
COMBAT (MALE ONLY)		Acute	Chronic	Acute	Internal	Inguinal Hernia			
Infantryman (11B)	MALE	5.1	37.6	8.8	58.1	33.1	13.1	2.7	19.7
Indirect Fire (11C)	MALE	5.0	26.0	6.7	50.8	32.1	12.0	2.2	16.7
Heavy Anti-armor Weapons (11H)	MALE	3.6	26.9	10.8	56.7	32.0	7.9	1.1	21.2
Fighting Vehicle (11M)	MALE	4.3	24.5	8.2	40.0	37.9	9.1	1.7	15.5
Combat Engineer (12B)	MALE	4.1	29.8	10.6	49.2	37.7	10.8	1.8	17.1
Cannon Crewmember (13B)	MALE	4.8	26.7	9.5	48.5	35.2	10.6	2.3	14.3
Fire Support Specialist (13F)	MALE	3.3	27.2	9.5	50.3	33.4	12.1	2.9	22.0
Cavalry Scout (19D)	MALE	4.6	23.9	7.1	49.5	32.6	10.8	3.0	16.7
Armor Crewman (19K)	MALE	5.1	27.8	9.2	47.1	38.5	8.9	2.3	16.8
OPEN MOS (MALE & FEMALE)									
Radio Operator-Maintainer (31C)	MALE	5.1	26.9	6.0	48.2	22.6	9.0	4.7	14.1
	FEMALE	10.3	37.9	10.3	37.9	0.0	31.0	6.9	31.0
Combat Signaler (31K)**	MALE	4.2	19.0	7.9	34.3	32.0	9.7	1.9	15.9
	FEMALE	16.2	40.6	0.0	32.4	0.0	8.1	8.1	13.0
Power-Generation Equipment Repairer (52D)	MALE	3.2	26.8	8.2	59.0	32.6	9.7	5.0	13.6
	FEMALE	0.0	22.0	0.0	95.3	7.3	7.3	36.7	22.0
Chemical Operations Specialist (54B)	MALE	3.7	41.7	9.4	55.7	31.4	9.6	6.5	18.1
	FEMALE	2.9	35.1	8.8	38.1	14.6	8.8	0.0	24.3
Light-wheeled Vehicle Mechanic (63B)	MALE	3.8	36.6	7.1	50.7	36.9	7.9	4.0	20.8
	FEMALE	3.3	28.2	6.6	48.1	8.3	14.9	5.0	48.1
Track Vehicle Repairer (63H)	MALE	1.8	48.2	7.7	55.5	34.7	8.4	4.1	22.8
	FEMALE	0.0	23.7	0.0	47.4	15.8	6.8	1.4	22.7
Administrative Specialist (71L)	MALE	2.1	41.8	7.0	43.4	24.2	7.7	2.6	20.2
	FEMALE	4.3	26.7	1.7	24.1	11.6	7.4	1.1	38.0
Personnel Administration Specialist (75B)	MALE	4.9	36.3	7.9	46.6	24.5	8.3	2.9	28.2
	FEMALE	4.4	23.6	4.4	32.5	5.9	8.9	5.9	21.1
Equipment Records & Parts Specialist (76C)**	MALE	2.1	23.2	11.1	54.3	34.8	7.4	3.2	23.2
	FEMALE	7.0	41.8	3.5	13.9	5.2	8.7	1.7	15.8
	3.2	27.5	9.3	44.9	27.9	7.7	2.8	43.6	22.3

TABLE 5
HOSPITALIZATION CATEGORIES BY MOS AND GENDER, 1990-1994
Rates per 10,000 Person-Years

		PRIMARY DIAGNOSIS				JOINT (i.e., effusion, pain, stiffness)		727-727.99	
		BACK		KNEE		550-550.99		719-719.99	
		Acute	Chronic	Acute	Internal	Inguinal Hernia	Lower Extremity	Upper Extremity	
DUTY MOS									
Unit Supply Specialist (76)***									Synovium
MALE	4.9	30.1		10.0	44.9	27.4	9.1	2.6	tendon & bursa
FEMALE	6.7	39.9		3.0	24.4	5.9	10.4	3.0	
	5.3	32.2		8.5	40.5	22.8	9.4	2.7	
Petroleum Supply Specialist (77F)									
MALE	7.8	35.3		7.8	42.4	32.0	9.8	1.6	
FEMALE	4.1	28.7		6.8	31.5	1.4	12.3	2.7	
	7.1	34.0		7.6	40.3	26.1	10.3	1.8	
Motor Transport Operator (88M)									
MALE	8.4	36.8		7.9	47.5	30.6	11.8	3.5	
FEMALE	4.0	28.9		3.0	27.9	5.0	17.0	3.0	
	7.8	35.7		7.2	44.7	27.0	12.6	3.4	
Medical Equipment Repairer (91A)**									
MALE	3.9	27.7		11.2	47.7	33.1	14.6	1.9	
FEMALE	16.0	35.5		3.6	30.2	5.3	24.9	1.8	
	6.5	29.4		9.5	43.9	27.1	16.8	1.9	
Medical Specialist (91B)									
MALE	3.2	30.7		9.1	58.0	35.2	11.4	3.5	
FEMALE	5.2	28.9		2.2	37.1	11.1	8.9	7.4	
	3.6	30.4		7.8	54.2	30.8	10.9	4.2	
Food Service Specialist (94B)									
MALE	3.5	36.9		6.6	31.3	39.5	8.2	2.4	
FEMALE	5.9	29.4		2.6	22.9	7.9	8.5	2.0	
	4.0	35.3		5.8	29.5	32.8	8.3	2.3	
Military Police (95B)									
MALE	3.6	33.2		7.4	53.6	30.3	7.7	2.4	
FEMALE	4.9	43.7		5.8	54.4	4.9	14.6	1.9	
	3.8	34.3		7.2	53.6	27.6	8.4	2.3	
All MOS									
MALE	4.5	32.1		8.5	49.8	33.6	10.1	2.7	
FEMALE	5.4	31.4		3.4	31.0	7.9	11.0	3.2	
	4.5	32.0		8.0	47.9	31.0	10.2	2.7	
OVERALL									19.9

Tables 6, 7, and 8 display data for acute injuries only (ICD9 codes 800-904.99, 910-957.99, 960-995.99), because the cause codes from STANAG are only available for *acute* injury hospitalizations. Table 6 displays the ***trauma*** codes for acute injuries; the trauma codes describe the general type of injury that occurred (PASBA2 Users Manual, 1993). All people admitted to the hospital with an acute injury ICD9 code should also have a corresponding trauma code, and less than 0.1% of the trauma codes were missing. However, over 40% of men and women had injuries in which duty status was unknown. Approximately 35% of men and 32% of women had injuries recorded as “on duty,” 20% of which were injuries caused during activities other than training or exercises. Approximately 10% of the women’s injuries were self-inflicted, while 3% of the men’s injuries were self-inflicted. Less than 3% of the injuries for men and women were battle-related. Appendix 4 displays in greater detail the top 15 trauma cause codes for each MOS.

Table 7 displays the ***summary*** injury cause codes for acute injuries. These injury categories describe the conditions under which an injury occurred (PASBA2 Users Manual, 1993). The athletics and sports category includes physical fitness training; environmental factors includes heat and cold injuries, high and low pressure injuries, noise and hunger; and poisons includes ingesting or inhaling toxic substances (intentional and unintentional), stings or bites of reptiles or arthropods, and fire, hot liquids or corrosive substances. Falls and other unspecified agents were the cause of approximately 32% of injuries for men and women, and accidents in land transport caused approximately 16% of all injuries. Poisonings, fire, and hot or corrosive substances were the second largest cause of women’s injuries (22%) and athletics and sports were the third largest cause of men’s injuries (16%). War-related injuries (whether employed by the enemy or with one’s own instrumentalities) accounted for 2.3% of the injuries in men and 1% of the injuries in women.

Table 8 displays ***specific*** injury cause codes for acute injuries. These categories have been elaborated into more specific injury causes than shown in Table 7 (PASBA2 Users Manual, 1993). Other Specified Agents accounted for approximately 10% of the injuries in both men and women; this category could not be further defined. Ingesting toxic substances accounted for 3.7% of men’s injuries and 16.6% of women’s injuries. Being a driver or passenger in a non-military vehicle accounted for 9.2% of the injuries in

men and 11.5% of the injuries in women. Fighting accounted for 6% of men's injuries, but only 1.8% of women's injuries. Parachuting from a military aircraft accounted for 4.5% of men's injuries and 1.5% of women's injuries. Falls or jumps from one level to another accounted for 5.3% of men's injuries and 6.3% of women's injuries. Appendix 5 displays the top 15 specific injury causes for each MOS.

TABLE 6
TRAUMA CODES FOR ACUTE INJURIES

MALES

<u>TRAUMA</u>	<u>Frequency</u>	<u>Percent</u>
Unknown On/Off Duty, Nonmilitary	10268	41.0
*On Duty-other	5165	20.6
Off Duty-Accidental Injury	3885	15.5
*On Duty-schemes, exercises	1479	5.9
*On Duty-scheduled training	1382	5.5
Assault	1354	5.4
Self-inflicted	772	3.1
*Battle Wound/Injury	698	2.8
Intervention of legal authority	35	0.1
*Males - Total On-Duty Injuries	34.8%	

FEMALE

<u>TRAUMA</u>	<u>Frequency</u>	<u>Percent</u>
Unknown On/Off Duty, Nonmilitary	721	43.1
*On Duty-other	322	19.3
Off Duty-Accidental Injury	223	13.3
Self-inflicted	166	9.9
*On Duty-scheduled training	138	8.3
*On Duty-schemes, exercises	55	3.3
Assault	30	1.8
*Battle Wound/Injury	17	1.0
*Females-Total On-Duty Injuries	31.9%	

TABLE 7
SUMMARY INJURY CAUSE CODES FOR ACUTE INJURIES

MALE

<u>INJURY</u>	<u>Frequency</u>	<u>Percent</u>
Falls, other agents	7854	31.4
Accidents-Land Transport	4239	16.9
Athletics & Sports	3967	15.8
Machinery, tools	3064	12.2
Poisons, fire, hot/corrosive substances	1921	7.7
Accidents-Air Transport	1232	4.9
Environmental Factors	982	3.9
Guns, explosives	980	3.9
Instrumentalities of War-Enemy	549	2.2
Complications-Medical	180	0.7
Instrumentalities of War-Self, Accidents	50	0.2
Accidents-Water Transport	20	0.1

FEMALE

<u>INJURY</u>	<u>Frequency</u>	<u>Percent</u>
Falls, other agents	541	32.4
Poisons, fire, hot/corrosive substances	366	21.9
Accidents-Land Transport	264	15.8
Machinery, tools	179	10.7
Athletics & Sports	148	8.9
Environmental Factors	70	4.2
Complications-Medical	51	3.1
Accidents-Air Transport	27	1.6
Instrumentalities of War-Enemy	13	0.8
Guns, explosives	10	0.6
Instrumentalities of War-Self, Accidents	3	0.2

TABLE 8
TOP 15 SPECIFIC INJURY CAUSE CODES FOR ACUTE INJURIES

MALES

INJURY	Frequency	Percent
Other Specified Agents	2368	9.5
Driver, Passenger-Non Military Vehicle	2308	9.2
Cutting/piercing instrument	1536	6.1
Fighting	1515	6.1
Fall/jump-different level	1334	5.3
Parachute-Military aircraft	1118	4.5
Basketball	1043	4.2
Football	1010	4.0
Fall/jump-same level	1007	4.0
Ingest toxic substance	924	3.7
Twist, turn, slip (no fall)	733	2.9
Motorcycle	639	2.6
Excessive Heat	582	2.3
Bullets/projectile	502	2.0
Other sports	463	1.8

FEMALES

INJURY	Frequency	Percent
Ingest toxic substance	278	16.6
Driver, Passenger-Non Military Vehicle	193	11.5
Other Specified Agents	168	10.0
Fall/jump-different level	106	6.3
Fall/jump-same level	100	6.0
Cutting/piercing instrument	89	5.3
Twist, turn, slip (no fall)	54	3.2
Excessive Heat	40	2.4
Fall/jump-stairs or ladder	39	2.3
Driver, Passenger-Military Vehicle	33	2.0
Ill-Fitting Shoes, Clothes	32	1.9
Other sports	31	1.9
Fighting	30	1.8
Therapeutic drugs	30	1.8
Basketball	27	1.6

DISCUSSION

This report is the first to define hospitalizations for injuries and musculoskeletal conditions by occupational MOS, and by design is descriptive in nature. This initial report is the first in a series investigating injuries as related to occupation. This study found the highest rate of injury/poisoning (260 per 10,000 person-years) and musculoskeletal hospitalizations (248 per 10,000 person-years) for men was in Infantrymen (MOS 11B). The highest rate of musculoskeletal hospitalizations (310 per 10,000 person-years) for women was among Light-wheeled Vehicle Mechanics (MOS 63B,), and the highest rate of injury/poisoning hospitalizations (206 per 10,000 person-years) was in Medical Equipment Repairer (MOS 91A). Demographic differences (such as age, race or rank) among and between the various MOSs will account for some of the crude differences displayed in this report. Nonetheless, if one's interest is in identifying MOSs with high injury rates, then demographic differences may be less important. Future analyses and reports will include multivariate statistics that will control simultaneously for available demographic variables. However, such analyses are beyond the scope of this report, the purpose of which was only to identify MOSs with the highest hospitalization rates.

This study revealed that certain MOSs experience higher rates of hospitalization for injuries and musculoskeletal conditions. Furthermore, hospitalization rates for men and women vary widely by MOS. Certain types of injuries are more common in certain MOSs; this may be the nature of the job. For example, if a job does not require jumping out of airplanes, parachute-related injuries are expected to be rare in that job category.

Thirty percent of acute injuries were coded as "on duty," while over 40% were coded as "unknown whether on or off duty, nonmilitary injuries." It is highly unlikely that this code was used for nonmilitary injuries in our study, because only active duty enlisted personnel were included in the study. Consequently, this code was for acute injuries that were unknown as to whether they occurred on duty or off duty. A recent hospital record validation study (Amoroso, unpublished, 1997) suggests that a high percentage of the injuries coded as "unknown whether on or off duty" are actually classifiable based on the information readily available in the hard copy medical record. Furthermore, as many as 50% of these injuries may actually be duty-related. Identifying these cases with a specific category (i.e., on duty-scheduled training) will yield a better

understanding of where these injuries occurred. The number of injuries occurring on duty undoubtedly would increase if the unknown category were coded more accurately. However, at a minimum, over 30% of injuries are coded “on duty,” and are believed to be accurately coded. It is also possible that some hospitals record duty status more completely than others, and this rate would vary by hospital. Furthermore, the trauma codes are not mutually exclusive. The duty status does not have to be coded. For example, if a person was hospitalized for an assault that occurred on-duty, the trauma category could be coded as “Assault” or as “On-duty.” Refining of the trauma code categories would eliminate this duplicity.

Analysis of the specific injury cause codes revealed that “Other Specified Agents” caused 10% of women’s injuries and 9.5% of men’s injuries. This category contains miscellaneous causes that cannot be classified into one of the other STANAG injury categories. The list of injury codes is exhaustive, and it is possible that these injury causes are so varied they cannot be grouped into smaller descriptive categories.

Several minor deficiencies or errors in the data were discovered during the analysis. Small errors in the data for gender coding are evident because women appear in the MOSs closed to women. These individuals were incorrectly coded, but represented only 0.06% to 0.20% of the population of any MOS. Perhaps other MOSs have similar errors in gender coding, but this would not be discovered in the absence of such an obvious inconsistency. If the range of error is similar in the other MOSs as well, then the gender coding error per MOS is quite small. It is possible that the other MOSs had soldiers incorrectly coded with respect to gender, and this would influence the subsequent gender analyses of hospitalizations and injuries. However, since the known percentage of error is so small, we do not believe that it exerts any meaningful influence on the results.

The next step in research may be a further analysis of the MOSs with high hospitalization rates. Specific ICD9 codes could be studied, in addition to general acute injuries and musculoskeletal conditions. MOSs could be analyzed prospectively using longitudinal statistical methods to determine how hospitalization rates have been changing with time. Potential confounding variables affecting the outcomes, such as age, race, gender, and physical fitness level should be controlled for in the analysis. These study results would enable specific MOSs to be targeted for modifications in training or other interventions to reduce injury rates.

CONCLUSION

Rates of hospitalization for injury and musculoskeletal conditions vary substantially both by gender and occupation. The demographic composition of the top 25 Army occupations also shows substantial variation.

Multivariate analyses that control for demographic factors may allow isolation of the role of occupational demands on risk of injury and subsequent musculoskeletal conditions. Further research on the MOSs with high injury and musculoskeletal hospitalization rates is needed. MOSs should be analyzed using multivariate techniques with potential confounding variables controlled for in the analysis. These study results do provide a strong indication of which MOSs are at high risk of injury, and point directly to several specific MOSs that may be good candidates for intervention.

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APPENDICES

APPENDIX 1
ENLISTED MOS PHYSICAL DEMANDS AND TASKS,
FREQUENCY BY PERSON-TIME, 1990-1994

MOS	Title	Gender Restriction	Physical Demands	Physical Requirements - Tasks	5 Year Person-Time	% Total Enlisted
11B	Infantryman	Closed to women	Very heavy	<p>1. Frequently visually identifies vehicles, equipment, and individuals at long distances.</p> <p>2. Occasionally raises and carries 160 pounds person on back.</p> <p>3. Frequently performs all other tasks while carrying a minimum of 65 pounds, evenly distributed over entire body.</p> <p>4. Frequently digs, lifts, and shovels 21 pounds scoops of dirt in bent, stooped or kneeling position.</p> <p>5. Must be able to hear oral commands in outdoor area from distances up to 50 meters.</p> <p>6. Frequently walks, runs, crawls, and climbs over varying terrain for a distance of up to 25 miles.</p> <p>7. Frequently runs for short distances.</p> <p>8. Occasionally walks slowly for 2 hours out of 6 while carrying 26 pounds.</p> <p>9. Frequently gives oral commands in outside area at distances up to 50 meters.</p> <p>10. Frequently lifts and lowers 32 pounds bags shoulder high.</p> <p>11. Frequently throws 1 pound object 40 meters.</p> <p>12. Occasionally throws 1 pound object 40 meters.</p> <p>13. Occasionally climbs a rope a distance of up to 30 feet.</p> <p>14. Occasionally performs all other tasks while carrying a minimum of 65 pounds evenly distributed over entire body.</p>	194,384	7.10
11C	Indirect Fire Infantryman	Closed to women	Very heavy	<p>1. Frequently performs all other tasks while carrying a minimum of 65 pounds, evenly distributed over entire body.</p> <p>2. Frequently runs for short distances.</p> <p>3. Occasionally raises and carries 160 pounds person on back.</p> <p>4. Occasionally throws 1 pound object of 40 meters.</p> <p>5. Frequently lifts and lowers 32 pound bags shoulder high.</p> <p>6. Occasionally lifts and lowers 282 pounds 6 inches as part of a 2 soldier team (prorated 141 pounds).</p> <p>7. Frequently gives oral commands in outside area at distances up to 50 meters.</p> <p>8. Frequently digs, lifts, and shovels 21 pounds scoops of dirt in bent, stooped or kneeling position.</p> <p>9. Occasionally walks slowly for 2 hours out of 6 while carrying up to 41 pounds.</p> <p>10. Frequently lifts and carries rapidly for short distances, 156 pounds as part of a 2 soldier team (prorated 78 pounds).</p> <p>11. Frequently lifts 27 pounds object 4 feet high and places in vertical tube.</p> <p>12. Occasionally digs, lifts, and shovels 21 pounds scoops of dirt.</p>	35,822	1.30

MOS	Title	Gender Restriction	Physical Demands	Physical Requirements - Tasks	5 Year Person-Time	% Total Enlisted
11H	Heavy Anti-armor Weapons Infantryman	Closed to women	Very heavy	<p>1. Frequently performs all other tasks while carrying a minimum of 65 pounds, evenly distributed over entire body.</p> <p>2. Constantly visually identifies vehicles, equipment, and individuals at long distances.</p> <p>3. Occasionally walks, runs, crawls, and climbs over varying terrain for a distance of up to 25 miles.</p> <p>4. Frequently raises and carries 160 pounds person on back.</p> <p>5. Occasionally digs, lifts, and shovels 21 pounds scoops of dirt in bent, stooped or kneeling position.</p> <p>6. Occasionally walks slowly for 2 hours out of 6 while carrying a minimum of 26 pounds.</p> <p>7. Frequently gives oral commands in outside area at distances up to 50 meters.</p> <p>8. Frequently lifts 55 pounds 3 feet high, moves laterally 5 feet and places object in tube.</p> <p>9. Occasionally carries 153 pounds 10 meters.</p> <p>10. Occasionally performs all other tasks while carrying a minimum of 65 pounds, evenly distributed over entire body.</p>	27,850	1.00
11M	Fighting Vehicle Infantryman	Closed to women	Very heavy	<p>1. Frequently performs all other tasks while carrying a minimum of 65 pounds, evenly distributed over entire body.</p> <p>2. Occasionally raises and carries 160 pounds person on back.</p> <p>3. Frequently digs, lifts, and shovels 21 pounds scoops of dirt in bent, stooped or kneeling position.</p> <p>4. Frequently visually identifies vehicles, equipment, and individuals at long distances.</p> <p>5. Frequently throws 1 pound object a distance of 40 meters.</p> <p>6. Occasionally walks, runs, crawls, and climbs over varying terrain for a distance of up to 25 miles.</p> <p>7. Occasionally walks slowly for 2 hours out of 6 while carrying 26 pounds.</p> <p>8. Frequently gives oral commands in outside area at distances up to 50 meters.</p> <p>9. Frequently lifts 89 pounds 5 feet.</p> <p>10. Frequently lowers 58 pounds 3 feet.</p> <p>11. Must be able to hear oral commands in outdoor area from distances up to 50 meters.</p> <p>12. Occasionally throws 1 pound object 40 meters.</p> <p>13. Frequently lifts 45 pounds waist high.</p> <p>14. Occasionally lifts 80 pounds chest high.</p> <p>15. Occasionally digs, lifts, and shovels 21 pounds scoops of dirt.</p> <p>16. Frequently lifts 55 pounds over head.</p> <p>17. Occasionally performs all other tasks while carrying a minimum of 65 pounds evenly distributed over entire body.</p>	71,738	2.60

MOS	Title	Gender Restriction	Physical Demands	Physical Requirements - Tasks	5 Year Person-Time	% Total Enlisted
12B	Combat Engineer	Closed to women	Very heavy	1. Frequently lifts 124 pounds and carries 25 feet. 2. Occasionally lifts 90 pounds and carries 25 feet. 3. Occasionally pushes and pulls 500 pounds using a torque as part of a 2 soldier team (prorated at 250 pounds per soldier). 4. Occasionally digs to fill 33 pounds sandbags. 5. Must possess normal color vision. 6. Must possess finger dexterity in both hands.	55,718	2.00
13B	Cannon Crewmember	Closed to women	Very heavy	1. Frequently lifts 184 pounds 3 feet and carries 6 feet as part of a 2 soldier team (prorated at 97 pounds per soldier). 2. Frequently lifts 243 pounds 2 feet and carries 30 feet as part of a 2 soldier team (prorated at 121.5 pounds per soldier). 3. Constantly lifts 200 pounds 3 feet and carries 4 feet as part of a 2 soldier team (prorated at 100 pounds per soldier). 4. Constantly utilizes visual sighting devices. 5. Must possess red/green color discrimination	96,059	3.50
13F	Fire Support Specialist	Closed to women	Very heavy	1. Frequently lifts and lowers 70 pounds 3 feet. 2. Occasionally lifts and lowers 75 pounds and carries 8 feet. 3. Frequently digs, lifts and shovels 10 pounds scoops of dirt in bent, stooped or kneeling position. 4. Occasionally performs all other tasks while carrying a minimum of 65 pounds, evenly distributed over entire body. 5. Constantly uses binoculars, lasers and other optical sighting devices. 6. Must be able to hear a wide range of human voice tones through headphones. 7. Must possess normal color vision. 8. Must possess finger dexterity in both hands.	27,249	1.00
19D	Cavalry Scout	Closed to women	Very heavy	1. Frequently lifts 100 pounds 4 feet and carries 5 meters. 2. Occasionally lifts 100 pounds 4 feet and carries 5 meters. 3. Frequently digs, lifts, and shovels 21 pounds scoops of dirt 2 feet by 3 feet while bending, stooping and kneeling. 4. Frequently climbs 9 feet. 5. Must possess normal color vision correctable to 20/20 in one eye and 20/100 in the other. 6. Must possess finger dexterity in both hands.	43,602	1.60

MOS	Title	Gender Restriction	Physical Demands	Physical Requirements - Tasks	5 Year Person-Time	% Total Enlisted
19K	Armor Crewman	Closed to women	Very heavy	1. Frequently lifts 125 pounds 1 foot. 2. Occasionally lifts and carries 130 pounds 150 feet. 3. Frequently climbs 9 feet. 4. Must possess normal color vision, and vision correctable to 20/20 in one eye and 20/100 in the other. 5. Must possess finger dexterity in both hands.	73,069	2.70
31C	Radio Operator-Maintainer	Open	Very heavy	1. Frequently lifts 42 pounds. 2. Occasionally lifts 100 pounds and carries 3 feet. 3. Occasionally pulls with 400 fl/lb of force. 4. Must possess finger dexterity in both hands. 5. Must be able to hear a wide range of human voice tones. 6. Frequently speaks into a microphone.	26,360	1.00
31K	Combat Signaler	Unknown	Unknown	Discontinued job code 31 Oct 93. New code 31U, Signal Support Systems Specialist.	22,801	0.80
52D	Power-Generation Equipment Repairer	Open	Very heavy	1. Occasionally lifts/lowers 250 pounds up/down 2 feet as part of a two soldier team prorated at 125 pounds per soldier using authorized lifting devices. 2. Occasionally lifts and lowers 150 pounds up/down 4 feet as part of a two soldier team prorated at 75 pounds per soldier. 3. Occasionally lifts/lowers and carries 42 pounds. 4. Must possess normal color vision. 5. Must possess finger dexterity in both hands. 6. Frequently reads complex schematic diagrams.	29,308	1.10
54B	Chemical Operations Specialist	Open	Very heavy	1. Many tasks routinely are performed in MOPP 1-4 equipment. 2. Frequently pushes and pulls 474 pounds 3 feet (task may require two soldiers). 3. Constantly raises from horizontal to vertical position 237 pounds three feet. 4. Occasionally lifts and carries 86 pounds approximately 50 feet. 5. Must possess normal color vision.	38,410	1.40
63B	Light-wheeled Vehicle Mechanic	Open	Very heavy	1. Occasionally lifts 230 pounds as part of a 2 soldier team (prorated at 115 pounds). 2. Occasionally lifts 150 pounds 6 feet, carries 50 feet and climbs 5 feet as part of a 2 soldier team (prorated at 75 pounds per soldier). 3. Must possess normal color vision. 4. Frequently reads detailed technical manuals. 5. Must possess finger dexterity in both hands. 6. Frequently lifts 75 pounds and carries 50 feet.	80,607	2.90

MOS	Title	Gender Restriction	Physical Demands	Physical Requirements - Tasks	5 Year Person-Time	% Total Enlisted
63H	Track Vehicle Repairer	Open	Very heavy	1. Occasionally lifts 400 pounds 4 feet and carries 50 feet as part of a 4 soldier team (prorated 100 pounds). 2. Frequently lifts 70 pounds 5 feet and carries 50 feet. 3. Occasionally lifts and lowers 218 pounds as part of a 2 soldier team (prorated 109 pounds). 4. Must possess normal color vision. 5. Frequently reads complex schematic diagrams. 6. Must possess finger dexterity in both hands.	23,262	0.90
71L	Administrative Specialist	Open	Medium	1. Frequently lifts 20 pounds and carries 3 miles. 2. Verbally provides assistance and instructions. 3. Frequently stands, stoops, and kneels for a period of 4 hours duration. 4. Frequently sits for a period of 8 hours duration. 5. Must possess finger dexterity in both hands. 6. Visually reviews documents and correspondence.	78,327	2.90
75B	Personnel Administration Specialist	Open	Medium	1. Occasionally lifts 25 pounds and carries 1/4 mile. 2. Occasionally sits for a period of 5 hours duration. 3. Frequently stands, stoops and kneels for a period of 4 hours duration. 4. Must possess finger dexterity in both hands. 5. Frequently reviews documents and correspondence. 6. Frequently provides guidance and assistance verbally.	27,156	1.00
76C	Equipment Records & Parts Specialist	Unknown	Unknown	Discontinued job code 31 Oct 93. Changed to 92A, Automated Logistical Specialist.	24,695	0.90
76Y	Unit Supply Specialist	Unknown	Unknown	Discontinued job code 31 Oct 93. Changed to 92A, Automated Logistical Specialist, and 92Y, Unit Supply Specialist.	62,715	2.30
77F	Petroleum Supply Specialist	Open	Very heavy	1. Frequently lifts 235 pounds 8 inches as part of a 2 soldier team (prorated at 117.5 per soldier). 2. Frequently lifts 100 pounds 4 feet and carries 50 feet. 3. Frequently pushes and pulls 100 pounds 5 feet. 4. Occasionally climb and descend 50 feet. 5. Occasionally digs, lifts, and shovels 21 pounds scoops of dirt 5 x 5 feet while bending, stooping or kneeling. 6. Must possess normal color vision and depth perception. 7. Frequently inspects visually. 8. Frequently writes reports and compiles data.	37,938	1.40

MOS	Title	Gender Restriction	Physical Demands	Physical Requirements - Tasks	5 Year Person-Time	% Total Enlisted
88M	Motor Transport Operator	Open	Very heavy	1. Occasionally lifts and pulls 130 pounds. 2. Constantly lifts and pivots 342 pounds as part of a 2 soldier team (prorated 171 pounds per soldier). 3. Must possess red/green color discrimination. 4. Constantly listens to engines to detect unusual sounds. 5. Frequently reads maps, signs and signals.	70,838	2.60
91A	Medical Equipment Repairer	Open	Moderately heavy	1. Occasionally lifts and carries 67 pounds. 2. Must possess hand/eye coordination. 3. Discontinued job code, 30 Apr 92. Changed to 91B, Medical Specialist.	26,179	1.00
91B	Medical Specialist	Open	Moderately heavy	1. Must possess normal color vision. 2. Must possess finger dexterity in both hands.	73,080	2.70
94B	Food Service Specialist	Open	Heavy	1. Occasionally lifts 100 pounds 2 feet and carries 100 feet as part of a 2 soldier team (prorated 50 pounds). 2. Frequently pushes, pulls, lifts and carries 50 pounds. 3. Occasionally digs, lifts, and shovels 21 pounds scoops of dirt 3 x 3 feet while bending, stooping or kneeling. 4. Frequently stands and/or walks for a period of 4 hours duration. 5. Must possess normal color vision. 6. Must possess finger dexterity in both hands. 7. Frequently writes to keep records and compile data.	72,473	2.60
95B	Military Police	Open	Moderately heavy	1. Lifts a maximum of 80 pounds with frequent lifting of 40 pounds. 2. Occasionally lifts and carries 70 pounds. 3. Frequently stands for extended periods of time. 4. Frequently speaks and listens using radio equipment. 5. Frequently writes reports and compiles data. 6. Must possess red/green color discrimination.	98,430	3.60

APPENDIX 2
YEARLY MOS TOTALS BY GENDER

DUTY MOS GENDER	YEAR					TOTAL
	1990	1991	1992	1993	1994	
11B MALE	47021	43823	37779	34098	31664	194384
11C MALE	8651	8178	6638	6293	6063	35822
11H MALE	7204	6478	4906	4702	4560	27850
11M MALE	13515	15775	14108	13801	14539	71738
12B MALE	14054	13662	10723	8923	8357	55718
13B MALE	24367	23610	18764	15429	13889	96059
13F MALE	6164	5951	5445	4999	4691	27249
19D MALE	9726	9973	8839	7770	7294	43602
19K MALE	15927	17330	14921	12860	12030	73069
31C FEMALE	932	760	539	376	295	2902
MALE	7585	6379	4229	2934	2332	23459
31C Yearly Total	8517	7140	4767	3310	2627	26360
31K FEMALE	458	335	286	124	31	1233
MALE	6882	6518	5404	2240	523	21568
31K Yearly Total	7340	6852	5690	2364	554	22801
52D FEMALE	289	257	249	285	284	1364
MALE	7018	6313	5642	4824	4147	27944
52D Yearly Total	7307	6570	5891	5109	4431	29308
54B FEMALE	764	678	640	648	685	3415
MALE	8165	7693	6642	6256	6239	34995
54B Yearly Total	8929	8371	7282	6904	6923	38410
63B FEMALE	1393	1193	1119	1144	1185	6035
MALE	17365	16338	14644	13702	12523	74572
63B Yearly Total	18758	17531	15763	14846	13708	80607
63H FEMALE	279	259	257	228	243	1266
MALE	5228	5172	4478	3713	3404	21996
63H Yearly Total	5508	5431	4735	3941	3647	23262
71L FEMALE	7914	7513	7039	6514	6284	35265
MALE	9768	9453	8762	7654	7425	43062
71L Yearly Total	17682	16967	15801	14168	13709	78327
75B FEMALE	1544	1390	1290	1252	1301	6776
MALE	4513	4334	3960	3836	3738	20380
75B Yearly Total	6057	5724	5249	5087	5038	27156
76C FEMALE	1611	1623	1580	747	179	5740
MALE	5720	5505	4904	2211	615	18955
76C Yearly Total	7331	7128	6485	2958	793	24695
76Y FEMALE	4206	3939	3561	1459	353	13518
MALE	14933	14214	12742	5660	1649	49197
76Y Yearly Total	19139	18152	16303	7118	2002	62715
77F FEMALE	1552	1502	1355	1421	1478	7309
MALE	7243	6641	5758	5440	5548	30629
77F Yearly Total	8795	8143	7114	6860	7026	37938
88M FEMALE	2263	2103	1869	1854	1934	10022
MALE	15297	13997	11731	10154	9657	60836
88M Yearly Total	17560	16100	13600	12008	11591	70858

APPENDIX 2
YEARLY MOS TOTALS BY GENDER

DUTY MOS GENDER	YEAR					TOTAL
	1990	1991	1992	1993	1994	
91A FEMALE	3151	2168	265	7	40	5631
MALE	11257	8246	827	23	196	20549
91A Yearly Total	14408	10414	1092	30	236	26179
91B FEMALE	1046	1809	3526	3631	3460	13472
MALE	5742	8349	15714	15876	13927	59609
91B Yearly Total	6787	10158	19240	19508	17387	73080
94B FEMALE	3262	3130	3140	2952	2800	15284
MALE	13721	12948	11708	9922	8890	57189
94B Yearly Total	16983	16078	14848	12873	11690	72473
95B FEMALE	2259	2050	1944	2014	2026	10293
MALE	20745	19717	16931	15658	15087	88138
95B Yearly Total	23003	21767	18874	17672	17114	98430
TOTAL	340731	327308	284857	243632	221566	1418093

APPENDIX 3
MOS and 5-YEAR AGE GROUPS (Person-Years)
1990-1994

APPENDIX 4
TRAUMA CODES by MOS

Infantryman=11B		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	1870	37.0	
On Duty-other	1025	20.3	
Off Duty-Accident	669	13.2	
On Duty-schemes, exercises	532	10.5	
On Duty-scheduled training	398	7.9	
Assault	231	4.6	
Battle Wound/injury	178	3.5	
Self-inflicted	137	2.7	
Intervention of legal authority	10	0.2	

Indirect Fire Infantryman=11C		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	306	38.6	
On Duty-other	166	21.0	
Off Duty-Accident	113	14.3	
On Duty-schemes, exercises	61	7.7	
On Duty-scheduled training	51	6.4	
Assault	48	6.1	
Self-inflicted	26	3.3	
Battle Wound/injury	21	2.7	

Combat Engineer=12B		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	495	38.6	
On Duty-other	272	21.2	
Off Duty-Accident	193	15.1	
On Duty-schemes, exercises	87	6.8	
Assault	76	5.9	
On Duty-scheduled training	73	5.7	
Battle Wound/injury	50	3.9	
Self-inflicted	34	2.7	
Intervention of legal authority	1	0.1	

Heavy Anti-armor Weapons Infantryman=11H		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		237	38.5
On Duty-other		119	19.3
Off Duty-Accident		84	13.6
On Duty-schemes, exercises		58	9.4
On Duty-scheduled training		43	7.0
Battle Wound/injury		31	5.0
Assault		23	3.7
Self-inflicted		21	3.4

Fighting Vehicle Infantryman=11M		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		592	37.0
On Duty-other		353	22.0
Off Duty-Accident		268	16.7
On Duty-schemes, exercises		91	5.7
Assault		88	5.5
On Duty-scheduled training		84	5.2
Battle Wound/injury		83	5.2
Self-inflicted		41	2.6
Intervention of legal authority		2	0.1

Cannon Crewmember=13B		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		843	41.1
On Duty-other		450	22.0
Off Duty-Accident		291	14.2
Assault		163	8.0
On Duty-schemes, exercises		102	5.0
On Duty-scheduled training		86	4.2
Self-inflicted		79	3.9
Battle Wound/injury		35	1.7

APPENDIX 4

TRAUMA CODES by MOS

Fire Support Specialist=13F		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	238	41.2	
On Duty-other	97	16.8	
Off Duty-Accident	86	14.9	
Assault	39	6.8	
On Duty-scheduled training	36	6.2	
On Duty-schemes, exercises	36	6.2	
Battle Wound/Injury	23	4.0	
Self-inflicted	21	3.6	
Intervention of legal authority	1	0.2	

Cavalry Scout=19D		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	373	37.8	
On Duty-other	219	22.2	
Off Duty-Accident	147	14.9	
On Duty-schemes, exercises	63	6.4	
On Duty-scheduled training	54	5.5	
Battle Wound/Injury	49	5.0	
Assault	46	4.7	
Self-inflicted	31	3.1	
Intervention of legal authority	4	0.4	

Radio Operator-Maintainer=31C		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		211	46.1
Off Duty-Accident		74	16.2
On Duty-other		73	15.9
On Duty-schemes, exercises		27	5.9
Self-inflicted		23	5.0
On Duty-scheduled training		22	4.8
Assault		20	4.4
Battle Wound/Injury		8	1.7

Combat Signaler=31K		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		155	41.1
Off Duty-Accident		83	22.0
On Duty-other		53	14.1
Assault		36	9.5
On Duty-scheduled training		20	5.3
Self-inflicted		16	4.2
Battle Wound/Injury		9	2.4
On Duty-schemes, exercises		4	1.1
Intervention of legal authority		1	0.3

Power Generation Equipment Repairer=52D		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		230	47.2
On Duty-other		92	18.9
Off Duty-Accident		78	16.0
Assault		26	5.3
On Duty-scheduled training		20	4.1
Self-inflicted		20	4.1
On Duty-schemes, exercises		11	2.3
Battle Wound/Injury		9	1.8
Intervention of legal authority		1	0.2

Armor Crewman=19K		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	583	36.1	
On Duty-other	479	29.7	
Off Duty-Accident	259	16.1	
On Duty-scheduled training	78	4.8	
On Duty-schemes, exercises	67	4.2	
Assault	58	3.6	
Battle Wound/Injury	57	3.5	
Self-inflicted	32	2.0	

APPENDIX 4 TRAUMA CODES by MOS

Chemical Operations Specialist=54B		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	288	43.4	
On Duty-other	123	18.5	
Off Duty-Accident	103	15.5	
On Duty-scheduled training	40	6.0	
On Duty-schemes, exercises	39	5.9	
Assault	31	4.7	
Self-inflicted	28	4.2	
Battle Wound//Injury	11	1.7	
Intervention of legal authority	1	0.2	

Light-wheeled vehicle mechanic=63B		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	546	44.3	
On Duty-other	249	20.2	
Off Duty-Accident	206	16.7	
Assault	80	6.5	
On Duty-scheduled training	52	4.2	
On Duty-schemes, exercises	46	3.7	
Self-inflicted	31	2.5	
Battle Wound//Injury	22	1.8	
Intervention of legal authority	1	0.1	

Track Vehicle Repairer=63H		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	134	43.4	
On Duty-other	62	20.1	
Off Duty-Accident	55	17.8	
Assault	19	6.1	
Self-inflicted	15	4.9	
On Duty-scheduled training	11	3.6	
On Duty-schemes, exercises	9	2.9	
Battle Wound//Injury	4	1.3	

Administrative Specialist=71L		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		376	48.2
On Duty-other		135	17.3
Off Duty-Accident		126	16.2
Self-inflicted		45	5.8
On Duty-scheduled training		34	4.4
Assault		30	3.8
On Duty-schemes, exercises		30	3.8
Battle Wound//Injury		4	0.5

Personnel Administration Specialist=75B		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		137	43.8
On Duty-other		60	19.2
Off Duty-Accident		58	18.5
On Duty-scheduled training		20	6.4
Assault		19	6.1
On Duty-schemes, exercises		9	2.9
Self-inflicted		9	2.9
Battle Wound//Injury		1	0.3

Equipment Records & Parts Specialist=76C		COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary		158	45.5
On Duty-other		72	20.7
Off Duty-Accident		55	15.9
Assault		17	4.9
On Duty-scheduled training		16	4.6
Self-inflicted		15	4.3
On Duty-schemes, exercises		12	3.5
Battle Wound//Injury		2	0.6

APPENDIX 4
TRAUMA CODES by MOS

Unit Supply Specialist=76Y		
	COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	403	48.6
Off Duty-Accident	140	16.9
On Duty-other	138	16.6
Assault	49	5.9
On Duty-scheduled training	37	4.5
Self-inflicted	32	3.9
On Duty-schemes, exercises	21	2.5
Battle Wound/IInjury	10	1.2
Intervention of legal authority	1	0.2

Medical Specialist=91A		
	COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	283	46.9
On Duty-other	102	16.9
Off Duty-Accident	85	14.1
Self-inflicted	38	6.3
Assault	31	5.1
On Duty-scheduled training	26	4.3
On Duty-schemes, exercises	24	4.0
Battle Wound/IInjury	13	2.2
Intervention of legal authority	2	0.3

Petroleum Supply Specialist=77F		
	COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	282	42.6
On Duty-other	148	22.4
Off Duty-Accident	97	14.7
Assault	39	5.9
On Duty-schemes, exercises	31	4.7
On Duty-scheduled training	26	3.9
Self-inflicted	24	3.6
Battle Wound/IInjury	14	2.1
Intervention of legal authority	1	0.2

Medical Specialist=91B		
	COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	548	46.9
On Duty-other	225	19.3
Off Duty-Accident	185	15.8
On Duty-scheduled training	62	5.3
On Duty-schemes, exercises	50	4.3
Assault	45	3.9
Self-inflicted	42	3.6
Battle Wound/IInjury	10	0.9
Intervention of legal authority	1	0.1

Motor Transport Operator=88M		
	COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	628	48.6
On Duty-other	262	20.3
Off Duty-Accident	181	14.0
Assault	61	4.7
Self-inflicted	48	3.7
Battle Wound/IInjury	43	3.3
On Duty-scheduled training	43	3.3
On Duty-schemes, exercises	24	1.9
Intervention of legal authority	3	0.2

Food Service Specialist=94B		
	COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	471	42.2
On Duty-other	219	19.6
Off Duty-Accident	190	17.0
Self-inflicted	65	5.8
On Duty-scheduled training	54	4.8
On Duty-schemes, exercises	52	4.7
Assault	51	4.6
Battle Wound/IInjury	12	1.1
Intervention of legal authority	2	0.2

APPENDIX 4
TRAUMA CODES by MOS

Military Police=95B	COUNT	% OF MOS
Unknown On/Off Duty, Nonmilitary	602	40.1
On Duty-other	294	19.6
Off Duty-Accident	282	18.8
On Duty-scheduled training	134	8.9
Self-inflicted	65	4.3
Assault	58	3.9
On Duty-schemes, exercises	48	3.2
Battle Wound/injury	16	1.1
Intervention of legal authority	4	0.3

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Infantryman=11B, MALES		HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Indirect Fire Infantryman=11C, MALES		HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Parachute-Military aircraft	562	11.1		Other Specified Agents	67	8.5	
Driver, Passenger-Non Military Veh	425	8.4		Parachute-Military aircraft	58	7.3	
Other Specified Agents	378	7.5		Fighting	54	6.8	
Fall/jump-different level	327	6.5		Driver, Passenger-Non Military Veh	53	6.7	
Cutting/piercing instrument	311	6.2		Cutting/piercing instrument	50	6.3	
Fighting	272	5.4		Fall/jump-different level	49	6.2	
Fall/jump-same level	192	3.8		Fall/jump-same level	33	4.2	
Excessive Heat	178	3.5		Football	31	3.9	
Motorcycle	162	3.2		Excessive Heat	27	3.4	
Inject toxic substance	153	3.0		Twist, turn, slip (no fall)	24	3.0	
Football	143	2.8		Basketball	23	2.9	
Bullets/projectile	141	2.8		Inject toxic substance	23	2.9	
Twist, turn, slip (no fall)	114	2.3		Motorcycle	22	2.8	
Basketball	109	2.2		Bullets/projectile	19	2.4	
Other sports	100	2.0		Fire, explosion	16	2.0	

Heavy Anti-armor Weapons Infantryman=11H, MALES		HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Fighting Vehicle Infantryman=11M, MALES		HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Driver, Passenger-Non Military Veh	65	10.6		Other Specified Agents	169	10.5	
Other Specified Agents	52	8.4		Driver, Passenger-Non Military Veh	145	9.1	
Parachute-Military aircraft	49	8.0		Fighting	102	6.4	
Fall/jump-different level	43	7.0		Cutting/piercing instrument	90	5.6	
Cutting/piercing instrument	33	5.4		Fall/jump-different level	75	4.7	
Football	28	4.5		Football	70	4.4	
Fighting	27	4.4		Excessive Heat	58	3.6	
Motorcycle	27	4.4		Twist, turn, slip (no fall)	53	3.3	
Inject toxic substance	26	4.2		Fall/jump-same level	46	2.9	
Fall/jump-same level	21	3.4		Occup Tracked/Semi Military Vehicle	46	2.9	
Excessive Heat	17	2.8		Basketball	43	2.7	
Twist, turn, slip (no fall)	15	2.4		Inject toxic substance	41	2.6	
Other sports	13	2.1		Shell Fragment, other/unspecified	39	2.4	
Basketball	11	1.8		Falling/projected obj/missile	36	2.2	
Incident to Military Aircraft	11	1.8		Driver, Passenger-Military Veh	35	2.2	

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Combat Engineer=12B, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	123	9.6
Driver, Passenger-Non Military Veh	115	9.0
Cutting/piercing instrument	88	6.9
Fighting	83	6.5
Fall/jump-different level	71	5.5
Football	47	3.7
Parachute-Military aircraft	43	3.4
Twist, turn, slip (no fall)	43	3.4
Fall/jump-same level	41	3.2
Basketball	40	3.1
Ingest toxic substance	40	3.1
Excessive Heat	32	2.5
Driver, Passenger-Military Veh	31	2.4
Falling/projected obj/missile	23	1.8
Other sports	23	1.8

Cannon Crewmember=13B, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	224	10.9
Driver, Passenger-Non Military Veh	202	9.9
Fighting	164	8.0
Cutting/piercing instrument	109	5.3
Fall/jump-different level	103	5.0
Ingest toxic substance	91	4.4
Basketball	90	4.4
Fall/jump-same level	88	4.3
Football	85	4.1
Bullets/projectile	55	2.7
Falling/projected obj/missile	55	2.7
Parachute-Military aircraft	54	2.6
Twist, turn, slip (no fall)	53	2.6
Motorcycle	37	1.8
Excessive Heat	35	1.7

Fire Support Specialist=13F, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	48	8.3
Fighting	46	8.0
Parachute-Military aircraft	45	7.8
Cutting/piercing instrument	41	7.1
Driver, Passenger-Non Military Veh	38	6.6
Fall/jump-different level	30	5.2
Fall/jump-same level	28	4.9
Ingest toxic substance	26	4.5
Basketball	24	4.2
Football	23	4.0
Motorcycle	21	3.6
Bullets/projectile	16	2.8
Twist, turn, slip (no fall)	16	2.8
Excessive Heat	12	2.1
Shell Fragment, other/unspecified	10	1.7

Cavalry Scout=19D, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	93	9.4
Cutting/piercing instrument	79	8.0
Driver, Passenger-Non Military Veh	68	6.9
Fighting	59	6.0
Fall/jump-different level	50	5.1
Twist, turn, slip (no fall)	42	4.3
Fall/jump-same level	38	3.9
Football	37	3.8
Shell Fragment, other/unspecified	32	3.2
Ingest toxic substance	27	2.7
Fall/jump-stairs or ladder	24	2.4
Basketball	22	2.2
Parachute-Military aircraft	22	2.2
Motorcycle	21	2.1
Other sports	21	2.1

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

ARMOR CREWMAN=19K, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	180	11.2
Driver, Passenger-Non Military Veh	137	8.5
Fall/jump-different level	96	6.0
Cutting/piercing instrument	95	5.9
Fighting	72	4.5
Football	70	4.3
Fall/jump-same level	69	4.3
Basketball	58	3.6
Twist, turn, slip (no fall)	57	3.5
Occup Tracked/Semi Military Vehicle	53	3.3
Ingest toxic substance	49	3.0
Motor Veh Non-traffic	49	3.0
Falling/projected obj/missile	47	2.9
Motorcycle	43	2.7
Static objects	31	1.9

ARMOR CREWMAN=19K, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	ARMOR CREWMAN=19K, FEMALE	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	ARMOR CREWMAN=19K, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	ARMOR CREWMAN=19K, FEMALE	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Driver, Passenger-Non Military Veh	40	9.6	Ingest toxic substance	9	22.5	Driver, Passenger-Non Military Veh	6	15.0	Driver, Passenger-Non Military Veh	4	10.0
Football	31	7.4	Fall/jump-different level			Parachute-Military aircraft			Other Specified Agents	3	7.5
Cutting/piercing instrument	29	6.9	Driver, Passenger-Non Military Veh			Excessive Heat			Parachute-Military aircraft	3	7.5
Other Specified Agents	27	6.5	Other Specified Agents			Ill-Fitting Shoes, Clothes			Excessive Heat	2	5.0
Parachute-Military aircraft	25	6.0	Athletics & Sports			Athletics & Sports			Ill-Fitting Shoes, Clothes	2	5.0
Basketball	24	5.7	Mountaineering, skiing			Mountaineering, skiing			Athletics & Sports	1	2.5
Ingest toxic substance	23	5.5	Basketball			Basketball			Mountaineering, skiing	1	2.5
Fighting	21	5.0	Contact skin/toxic subst			Contact skin/toxic subst			Basketball	1	2.5
Fall/jump-different level	17	4.1	Cutting/piercing instrument			Cutting/piercing instrument			Contact skin/toxic subst	1	2.5
Other sports	13	3.1	Hot liquids/steam			Hot liquids/steam			Cutting/piercing instrument	1	2.5
Fall/jump-stairs or ladder	12	2.9	Lift, push, pull			Lift, push, pull			Hot liquids/steam	1	2.5
Motorcycle	12	2.9	Other sports			Other sports			Lift, push, pull	1	2.5
Fall/jump-same level	11	2.6							Other sports	1	2.5
Soccer/Football unspec	11	2.6									
Twist, turn, slip (no fall)	11	2.6									

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Combat Signaler=31K, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Combat Signaler=31K, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Driver, Passenger-Non Military Veh	51	14.1	Other Specified Agents	3	20.0
Fighting	31	8.6	Fall/jump-same level	2	13.3
Cutting/piercing instrument	28	7.7	Calisthenics/PT	1	6.7
Other Specified Agents	21	5.8	Cutting/piercing instrument	1	6.7
Injett toxic substance	20	5.5	Fall/jump-different level	1	6.7
Basketball	19	5.2	Inhale toxic subst	1	6.7
Fall/jump-different level	18	5.0	Injett toxic substance	1	6.7
Fall/jump-same level	18	5.0	Other sports	1	6.7
Football	16	4.4	Softball	1	6.7
Fall/jump-stairs or ladder	10	2.8	Therapeutic drugs	1	6.7
Excessive Heat	9	2.5	Twist, turn, slip (no fall)	1	6.7
Static objects	9	2.5	Unspecified Agent/Unknown	1	6.7
Bullets/projectile	8	2.2			
Lift, push, pull	6	1.7			
Other sports	6	1.7			

Power Generation Equipment Repairer=52D, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Power Generation Equipment Repairer=52D, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	54	11.5	Driver, Passenger-Non Military Veh	3	15.8
Driver, Passenger-Non Military Veh	40	8.5	Other Specified Agents	3	15.8
Fighting	27	5.8	III-Fitting Shoes, Clothes	2	10.5
Cutting/piercing instrument	26	5.6	Injett toxic substance	2	10.5
Fall/jump-same level	26	5.6	Tools, power or hand	2	10.5
Fall/jump-different level	25	5.3	Unspecified vaccine	1	5.3
Injett toxic substance	24	5.1	Driver, Passenger-Military Veh	1	5.3
Basketball	20	4.3	Fall/jump-different level	1	5.3
Motorcycle	17	3.6	Fall/jump-stairs or ladder	1	5.3
Football	15	3.2	Foreign obj - body orifice	1	5.3
Fall/jump-stairs or ladder	12	2.6	Motor Veh Non-traffic	1	5.3
Machinery	12	2.6	Therapeutic drugs	1	5.3
Other sports	11	2.4			
Driver, Passenger-Military Veh	10	2.1			
Parachute-Military aircraft	10	2.1			

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Chemical Operations Specialist=54B MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Chemical Operations Specialist=54B FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	68	11.1	Other Specified Agents	10	20.0
Driver, Passenger-Non Military Veh	55	9.0	Ingest toxic substance	8	16.0
Fall/jump-different level	43	7.0	Driver, Passenger-Non Military Veh	6	12.0
Basketball	41	6.7	Fall/jump-same level	4	8.0
Football	36	5.9	Twist, turn, slip (no fall)	4	8.0
Fighting	35	5.7	Cutting/piercing instrument	2	4.0
Cutting/piercing instrument	32	5.2	Falling/projected obj/missile	2	4.0
Parachute-Military aircraft	30	4.9	Fighting	2	4.0
Ingest toxic substance	26	4.2	Parachute-Military aircraft	2	4.0
Other sports	18	2.9	Pedestrian	2	4.0
Fall/jump-same level	17	2.8	Sting of venomous arthropod	2	4.0
Twist, turn, slip (no fall)	16	2.6	Animals	1	2.0
Fall/jump-stairs or ladder	13	2.1	Driver, Passenger-Military Veh	1	2.0
Softball	12	2.0	Excessive cold	1	2.0
Sting of venomous arthropod	10	1.6	Fall/jump-different level	1	2.0

Light-wheeled vehicle mechanic=63B MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Light-wheeled vehicle mechanic=63B FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	124	10.8	Ingest toxic substance	10	12.3
Driver, Passenger-Non Military Veh	114	9.9	Driver, Passenger-Non Military Veh	8	9.9
Fighting	83	7.2	Cutting/piercing instrument	7	8.6
Cutting/piercing instrument	73	6.3	Other Specified Agents	7	8.6
Football	49	4.3	Twist, turn, slip (no fall)	6	7.4
Twist, turn, slip (no fall)	49	4.3	Fall/jump-same level	5	6.2
Fall/jump-same level	48	4.2	Fall/jump-different level	4	4.9
Fall/jump-different level	44	3.8	Parachute-Military aircraft	4	4.9
Motorcycle	42	3.6	Basketball	3	3.7
Basketball	40	3.5	Falling/projected obj/missile	3	3.7
Ingest toxic substance	38	3.3	Driver, Passenger-Military Veh	2	2.5
Parachute-Military aircraft	28	2.4	Other sports	2	2.5
Bullet(s)/projectile	26	2.3	Static objects	2	2.5
Softball	24	2.1	Sting of venomous arthropod	2	2.5
Fall/jump-stairs or ladder	23	2.0	Mountaineering, skiing	1	1.2

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Track Vehicle Repairer=63H, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Track Vehicle Repairer=63H, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	32	10.6	Twist, turn, slip (no fall)	2	25.0
Driver, Passenger-Non Military Veh	29	9.6	Horesmanship	1	12.5
Cutting/piercing instrument	21	7.0	Excessive cold	1	12.5
Fighting	18	6.0	Fall/jump-same level	1	12.5
Ingest toxic substance	16	5.3	Fighting	1	12.5
Basketball	14	4.7	Ingest toxic substance	1	12.5
Falling/projected obj/missile	13	4.3	Trackfield	1	12.5
Fall/jump-same level	11	3.7			
Twist, turn, slip (no fall)	11	3.7			
Football	10	3.3			
Fall/jump-different level	9	3.0			
Static objects	9	3.0			
Bullets/projectile	7	2.3			
Fire, explosion	7	2.3			
Softball	7	2.3			

Administrative Specialist=71L, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Administrative Specialist=71L, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Basketball	56	11.1	Ingest toxic substance	47	17.0
Other Specified Agents	46	9.1	Driver, Passenger-Non Military Veh	39	14.1
Driver, Passenger-Non Military Veh	45	8.9	Other Specified Agents	25	9.0
Ingest toxic substance	28	5.6	Cutting/piercing instrument	18	6.5
Cutting/piercing instrument	26	5.2	Fall/jump-same level	17	6.1
Football	26	5.2	Fall/jump-different level	15	5.4
Fighting	24	4.8	Fall/jump-stairs or ladder	10	3.6
Fall/jump-different level	22	4.4	Excessive Heat	8	2.9
Fall/jump-same level	21	4.2	Basketball	7	2.5
Twist, turn, slip (no fall)	20	4.0	Twist, turn, slip (no fall)	7	2.5
Softball	15	3.0	Lift, push, pull	6	2.2
Excessive Heat	14	2.8	Other sports	6	2.2
Parachute-Military aircraft	13	2.6	Driver, Passenger-Military Veh	5	1.8
Other sports	11	2.2	Animals	4	1.4
Soccer/Football unspec	8	1.6	Calisthenics/PT	4	1.4

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Personnel Administration Specialist= 75B, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Personnel Administration Specialist= 75B, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Basketball	33	12.9	Ingest toxic substance	10	17.2
Driver, Passenger-Non Military Veh	28	11.0	Callithemics/PT	6	10.3
Other Specified Agents	24	9.4	Driver, Passenger-Non Military Veh	6	10.3
Fighting	15	5.9	Other Specified Agents	5	8.6
Parachute-Military aircraft	12	4.7	Fall/Jump-different level	4	6.9
Twist, turn, slip (no fall)	11	4.3	Fall/Jump-same level	4	6.9
Cutting/piercing instrument	9	3.5	Surgical Treatment	2	3.4
Football	9	3.5	Fighting	2	3.4
Fall/Jump-different level	8	3.1	Lift, push, pull	2	3.4
Fall/Jump-same level	8	3.1	Motorcycle	2	3.4
Ingest toxic substance	8	3.1	Softball	2	3.4
Bullets/projectile	6	2.4	Baseball	1	1.7
Driver, Passenger-Military Veh	6	2.4	Cutting/piercing instrument	1	1.7
Fall/Jump-stairs or ladder	6	2.4	Excessive Heat	1	1.7
Softball	6	2.4	Excessive cold	1	1.7

Equipment Records & Parts Specialist= 76C, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Equipment Records & Parts Specialist= 76C, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Basketball	31	11.2	Ingest toxic substance	15	21.7
Other Specified Agents	31	11.2	Fall/Jump-different level	6	8.7
Driver, Passenger-Non Military Veh	30	10.8	Driver, Passenger-Non Military Veh	5	7.2
Fighting	25	9.0	Other Specified Agents	4	5.8
Football	20	7.2	Marching/drilling	3	4.3
Fall/Jump-different level	17	6.1	Other sports	3	4.3
Fall/Jump-same level	13	4.7	Therapeutic drugs	3	4.3
Cutting/piercing instrument	12	4.3	Twist, turn, slip (no fall)	3	4.3
Ingest toxic substance	9	3.2	Driver, Passenger-Military Veh	2	2.9
Twist, turn, slip (no fall)	8	2.9	Fall/Jump-same level	2	2.9
Soccer/Football unspec	7	2.5	Foreign obj - body orifice	2	2.9
Driver, Passenger-Military Veh	6	2.2	Parachute-Military aircraft	2	2.9
Parachute-Military aircraft	6	2.2	Static objects	2	2.9
Static objects	6	2.2	Mountaineering, skiing	1	1.4
Lift, push, pull	5	1.8	Other nontherapeutic test	1	1.4

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Unit Supply Specialist=76Y, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Unit Supply Specialist=76Y, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Driver, Passenger-Non Military Veh	83	11.8	Other Specified Agents	17	13.7
Other Specified Agents	80	11.3	Ingest toxic substance	16	12.9
Basketball	74	10.5	Driver, Passenger-Non Military Veh	13	10.5
Cutting/piercing instrument	45	6.4	Cutting/piercing instrument	7	5.6
Fighting	34	4.8	Fall/jump-different level	7	5.6
Football	33	4.7	Fall/jump-same level	7	5.6
Fall/jump-different level	25	3.5	Twist, turn, slip (no fall)	6	4.8
Ingest toxic substance	24	3.4	Hot liquids/steam	5	4.0
Parachute-Military aircraft	22	3.1	Other sports	5	4.0
Twist, turn, slip (no fall)	22	3.1	Basketball	4	3.2
Fall/jump-same level	21	3.0	Fall/jump-stairs or ladder	4	3.2
Other sports	16	2.3	Fighting	3	2.4
Driver, Passenger-Military Veh	15	2.1	Therapeutic drugs	3	2.4
Excessive Heat	14	2.0	Baseball	2	1.6
Motorcycle	14	2.0	Excessive Heat	2	1.6

Petroleum Supply Specialist=77F, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Petroleum Supply Specialist=77F, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	53	10.0	Ingest toxic substance	26	19.8
Driver, Passenger-Non Military Veh	50	9.4	Other Specified Agents	17	13.0
Fighting	41	7.7	Driver, Passenger-Non Military Veh	15	11.5
Basketball	34	6.4	Fall/jump-different level	10	7.6
Cutting/piercing instrument	27	5.1	Driver, Passenger-Military Veh	8	6.1
Fall/jump-same level	27	5.1	Fall/jump-same level	7	5.3
Ingest toxic substance	26	4.9	Fall/jump-stairs or ladder	4	3.1
Football	24	4.5	Fighting	4	3.1
Fall/jump-different level	17	3.2	Inhale toxic subst	4	3.1
Other sports	13	2.4	Cutting/piercing instrument	3	2.3
Twist, turn, slip (no fall)	13	2.4	Fire, explosion	3	2.3
Driver, Passenger-Military Veh	12	2.3	Softball	3	2.3
Falling/projected obj/missile	12	2.3	Twist, turn, slip (no fall)	3	2.3
Lift, push, pull	11	2.1	Shell fragment, other/unspecified	2	1.5
Bullets/projectile	10	1.9	Excessive Heat	2	1.5

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Motor Transport Operator= 88M, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Motor Transport Operator= 88M, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	156	13.6	Ingest toxic substance	27	18.9
Driver, Passenger-Non Military Veh	118	10.3	Driver, Passenger-Non Military Veh	18	12.6
Fighting	72	6.3	Fall/jump-different level	12	8.4
Driver, Passenger-Military Veh	63	5.5	Other Specified Agents	12	8.4
Cutting/piercing instrument	62	5.4	Fall/jump-same level	8	5.6
Fall/jump-different level	59	5.1	Driver, Passenger-Military Veh	6	4.2
Basketball	56	4.9	Cutting/piercing instrument	5	3.5
Fall/jump-same level	52	4.5	Therapeutic drugs	5	3.5
Ingest toxic substance	47	4.1	Twist, turn, slip (no fall)	5	3.5
Football	41	3.6	Sting of venomous arthropod	4	2.8
Motorcycle	36	3.1	Calisthenics/PT	3	2.1
Twist, turn, slip (no fall)	34	3.0	Fall/jump-stairs or ladder	3	2.1
Falling/projected obj/missile	23	2.0	Motor Veh Non-traffic	3	2.1
Other sports	22	1.9	Shell fragment, other unspecified	2	1.4
Motor Veh Non-traffic	19	1.7	Bullets/projectile	2	1.4

Medical Specialist=91A, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Medical Specialist=91A, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Other Specified Agents	47	9.6	Ingest toxic substance	18	15.5
Driver, Passenger-Non Military Veh	40	8.2	Driver, Passenger-Non Military Veh	14	12.1
Fighting	31	6.4	Cutting/piercing instrument	9	7.8
Fall/jump-same level	29	5.9	Other Specified Agents	8	6.9
Fall/jump-different level	27	5.5	Fall/jump-different level	7	6.0
Ingest toxic substance	26	5.3	Fall/jump-same level	6	5.2
Cutting/piercing instrument	23	4.7	Twist, turn, slip (no fall)	6	5.2
Football	23	4.7	Excessive Heat	4	3.4
Basketball	22	4.5	Therapeutic drugs	4	3.4
Parachute-Military aircraft	18	3.7	Driver, Passenger-Military Veh	3	2.6
Motorcycle	15	3.1	Fall/jump-stairs or ladder	3	2.6
Other sports	12	2.5	Fighting	3	2.6
Driver, Passenger-Military Veh	11	2.3	Ill-Fitting Shoes, Clothes	3	2.6
Twist, turn, slip (no fall)	10	2.0	Calisthenics/PT	2	1.7
Baseball	8	1.6	Foreign obj - body orifice	2	1.7

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Medical Specialist=91B, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Medical Specialist=91B, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Driver, Passenger-Non Military Veh	111	11.1	Driver, Passenger-Non Military Veh	21	12.6
Other Specified Agents	77	7.7	Other Specified Agents	21	12.6
Basketball	64	6.4	Ingest toxic substance	20	12.0
Fighting	62	6.2	Fall/jump-different level	10	6.0
Cutting/piercing instrument	61	6.1	Fall/jump-same level	8	4.8
Football	48	4.8	Cutting/piercing instrument	7	4.2
Fall/jump-same level	45	4.5	Sting of venomous arthropod	6	3.6
Fall/jump-different level	42	4.2	Excessive Heat	5	3.0
Ingest toxic substance	38	3.8	Fighting	5	3.0
Excessive Heat	34	3.4	Softball	5	3.0
Parachute-Military aircraft	31	3.1	High/low pressure	4	2.4
Motorcycle	29	2.9	Fall/jump-stairs or ladder	3	1.8
Twist, turn, slip (no fall)	29	2.9	Inhale toxic subst	3	1.8
Other sports	22	2.2	Lift, push, pull	3	1.8
Bullets/projectile	17	1.7	Mines	3	1.8

Food Service Specialist=94B, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Food Service Specialist=94B, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Cutting/piercing instrument	95	10.6	Ingest toxic substance	46	21.2
Driver, Passenger-Non Military Veh	83	9.2	Driver, Passenger-Non Military Veh	22	10.1
Other Specified Agents	77	8.6	Cutting/piercing instrument	19	8.8
Fighting	61	6.8	Fall/jump-different level	14	6.5
Ingest toxic substance	50	5.6	Fall/jump-same level	14	6.5
Basketball	47	5.2	Other Specified Agents	14	6.5
Fall/jump-different level	45	5.0	Excessive Heat	10	4.6
Fall/jump-same level	45	5.0	Basketball	6	2.8
Football	40	4.4	Fall/jump-stairs or ladder	6	2.8
Twist, turn, slip (no fall)	26	2.9	Callisthenics/PT	4	1.8
Parachute-Military aircraft	25	2.8	Hot liquids/steam	4	1.8
Fire, explosion	22	2.4	Inhale toxic subst	4	1.8
Bullets/projectile	20	2.2	Animals	3	1.4
Motorcycle	19	2.1	Fire, explosion	3	1.4
Ill-Fitting Shoes, Clothes	15	1.7	Foreign obj - body orifice	3	1.4

APPENDIX 5
SPECIFIC INJURY CAUSES BY MOS

Military Police=95B, MALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS	Military Police=95B, FEMALES	HOSPITALIZATION COUNT	% OF INJURIES IN MOS
Driver, Passenger-Non Military Veh	143	10.6	Ingest toxic substance	22	14.0
Other Specified Agents	117	8.7	Driver, Passenger-Non Military Veh	19	12.1
Fall/Jump-different level	72	5.3	Other Specified Agents	19	12.1
Cutting/piercing instrument	71	5.3	Fall/Jump-same level	15	9.6
Fall/Jump-same level	59	4.4	Ill-Fitting Shoes, Clothes	15	9.6
Ill-Fitting Shoes, Clothes	59	4.4	Cutting/piercing instrument	8	5.1
Fighting	56	4.2	Fall/Jump-different level	8	5.1
Football	55	4.1	Other sports	5	3.2
Basketball	48	3.6	Twist, turn, slip (no fall)	5	3.2
Ingest toxic substance	45	3.3	Basketball	3	1.9
Twist, turn, slip (no fall)	42	3.1	Excessive Heat	3	1.9
Motorcycle	40	3.0	Fall/Jump-stairs or ladder	3	1.9
Bullets/projectile	38	2.8	Falling/projected obj/missile	3	1.9
Other sports	36	2.7	Fighting	3	1.9
Parachute-Military aircraft	34	2.5	Sling of venomous arthropod	3	1.9

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